

AMERICAN AGRICULTURIST.

Designed to improve all Classes interested in Soil Culture.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON.

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[NEW SERIES—No. 130.

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For Contents, Terms, &c. see page 272.
Notes to Correspondents, pages 267.
For Advertisements, see pages 270-1.

The entrance to the office of the American Agriculturist is moved one door south, that is from No. 191 to No. 189 Water-st., (between Fulton and John streets—nearly opposite the United States Hotel). We are here fitting up a new Editorial Room, where we shall be happy to meet any of our subscribers and friends visiting the City. Letters to be addressed, hereafter, to 189 Water street.

Please refer to the "Baker's Dozen" Offer on page 269.

WORK FOR THE MONTH.

"But here the Autumn melancholy dwells,
And sighs her beautiful spells
Amongst the sunless shadows of the plain.
Alone, alone,
Upon a mossy stone
She sits and reckons up the dead and gone,
With the last leaves for a love rosary,
Whilst all the withered world looks drearily,
Like a dim picture of the drowned past,
In the hushed mind's mysterious far away,
Doubtful what ghostly thing will steal the last
Into that distance, gray upon the gray."

Hood's picture of the Autumn is, in the main, truthful, though the poets all have a way of overdoing things, throwing a beautiful mist about all things earthly, and making them look more shadowy and grand than they appear in the sunlight. The fact is, that the changes of the dying year come on so gradually, that the mind of the healthful observer, receives no rude shock, and never sees the sepulchral form of old Autumn sitting on a mossy stone, and reckoning up her losses with sombre visage. All that melancholy business is left to poets, languishing maidens, and other idle people. There is indeed, a change, but we hardly note it from day to day.

The leaves upon the maple and ash in the forest begin to bronze, even before the frost touches them, so that the glorious drapery of Summer loses some of its freshness before Autumn comes. The song of birds is broken, and many a voice is missing from the forest choir, before the full Autumn song of the insects fills our ears. The first frost is upon the lowlands and in the valleys, and our eyes grow familiar with the russet corn leaves, and the withered flowers, long before the verdure upon the plains and hills begins to fail. The golden rod and asters, purple and white, maintain their freshness and bloom, even after the frosts. The morning air is,

indeed, chill, but the middle of the day has still a Summer glow, so that we hardly realize the Summer has gone. The purple and yellow hues steal softly over the forest landscape, growing more brilliant day by day, but so silently that we wonder when the change was made, even in the greatest blazonry of the gorgeous scene. We miss the songs and flowers of Summer, but are hardly conscious that Autumn is at all sombre or womanish. The season rather seems to us as a hale, well-conditioned fellow, a little old indeed, but hearty, and dispensing favors with a freedom and fullness that indicates a joyous heart and sound health.

The farmer has certainly no occasion to brood over the dispensations that come to him in November. His fowls have brooded to so good purpose that he will find it up hill business to wear a long face if he tries. Look into the poultry yard. What a crowing of young cockerels, flush with juvenile courtesies to their feathered mates! What a strutting and clucking of turkeys, jubilant and unsuspecting of the fate that awaits them at the approaching Thanksgiving, or the remoter Christmas! What cackling of geese and quacking of ducks, all sleek and beautiful, full fledged for Winter. The death of the insects, if he deplore them, has been a large gain to his feathered tribes. He cannot feel very uncomfortable at the loss of their songs. Look into his granaries. What bins of wheat and cribs of corn are stored away, like piles of gold. Look into his cellar. What heaps of roots, an ample supply for man and beast, for the long Winter months. Surely, it is not for this man to see in Autumn a moping old lady, shivering upon the brink of the grave. Such visions may do for Wall-street, and we should not wonder if many of the dreamers there, in these times of panic and falling of stocks, were not turning to the farm with longing eyes, and bewailing the day they quit the plow. To many of them

"The melancholy days have come—the saddest of the year."

But the farmer has something to fall back upon besides bank stock. He has no notes to meet at 3 o'clock P. M., and he has no uncomfortable apprehension of moving out of a palace on account of his failure in business. His bank of earth is still good, and his shares of plow are still above par. They have brought in a glorious dividend this year, when so many other shares have proved failures. He has a stock of bread on hand for his family for a whole year, beeves in the stall, and fat porkers in the sty. Come

what will, the city must buy of him. His is a legitimate trade, that the world cannot get along without. The farmers' calling cannot fail to rise in the world's esteem in these times of revulsion and ruin. If the crash shall only open the eyes of men, and convince them that we have too many traffickers, and too few producers,—if it shall lead multitudes to return to the plow, and to cultivate the millions of untilled acres that lie waste upon our sea-board, the panic will be an infinite gain to the country.

Farmers should be the last class to hang or drown themselves this month, while so many in the city are looking back to their condition, with a perfect longing for their leeks and onions. If they have ever had thoughts of quitting the farm, we advise them to take counsel of a city merchant, and revise their plans. They should settle down into the happy conviction that they have the noblest and most independent calling upon earth, the greatest occasion to thank God for their present lot, and to take courage for the future.

PERMANENT IMPROVEMENTS.

They should turn over a new leaf this Fall, and begin to make their plans for a life-lease of the acres they now occupy. It is one of the greatest drawbacks to our husbandry, that nobody seems to be settled. Every man upon the farm, almost, has his ideal of a farmer's home away out West. He is not seeking to realize it in his present position. He lives, every year, as if he might sell out and move in the Spring. He does not repair the house or barn, he does not set out an orchard, he does not put a new wall or fence around the garden. He makes no investment that will not bring in its return the present season. This course is ruinous to the land, and to the pecuniary interests of its proprietor.

Farmers ought to work their fields, and build barns to save their manures, as if they expected to occupy them for life. They are quite as certain to get a fair price for their improvements as for the old acres unimproved. A purchaser will be influenced in his views of the value of the property by its present productiveness. A meadow yielding three tons to the acre is worth more than three times as much as one yielding but one ton to the acre. It will not cost three times the present value of the land to make it three times as productive. A farm that furnishes the material to make five hundred loads of manure, will sell much better than one where but one hundred is made. The air of thrift that hangs about an improving

farm makes it sell well. It raises the expectations of the purchaser, as he flatters himself that he can manage quite as well as the present occupant.

REMODELING THE OLD BARN,

or building a new one, will then certainly be good policy this Fall, if you have not already attended to it. Consider how many hundreds of loads of manure, what tons of ammonia have been wasted in the old establishment, and put a stop to this large leak in your ship. It is an old affair, but the timbers are yet sound, and by moving it a few rods you may put under it a cellar, and provide much better accommodations for your stock. Enlarge it if necessary, so that every animal may have shelter for the Winter. It is now simply a planked building, letting in all the winds at the cracks. It must be newly covered and made tight, so that you can command the circulation of the air with a ventilator. Remember that wintering cattle at the stack-yard is as wasteful as it is barbarous, costing at least a fourth more of fodder to carry an animal through. Let this reproach of our husbandry be wiped out henceforth.

If the old barn is rotten in its timbers, pull it down, and build anew. Consult some of your neighbors who have a good barn, for a plan, and make such additions as your location and the style of your farming suggests.

ONE BARN TO A FARM.

Some farmers err in having too many barns scattered about their premises. Some of them are a half or three-quarters of a mile from the house, and in the Winter, they have to take a journey twice, daily at least, in the cold to fodder the cattle. This is a great waste of labor, and the cattle usually suffer from neglect unless the owner sees to the feeding in person. One barn indeed involves a good deal of carting of hay, and of manure, but this is a small evil in comparison with having the cattle at a distance in the Winter. Stock, in order to do their best, should not only be housed in Winter, but should be fed thrice daily, and at regular hours. Much of the fodder is wasted if they are fed at longer intervals. If fed at irregular hours they suffer from hunger, and become impatient. To lay on flesh or fat kindly, they should be kept quiet in the intervals of foddering. If these ends are to be sought, all the stock should have room in the home barn, and should be under the eye of the owner every day.

THE CARTING OF MANURE

may be saved, in part, by making a portion of your compost upon the fields where you design to use it. The meadow, for instance, that you design for corn next season, may be furnished with muck heaps for the making of compost this Fall. The manure may be drawn to these heaps and mixed now, or early in April. If covered immediately with the muck and protected from washing, the manure will lose little of its value, and the work in Spring will be hastened.

THE PIG STY

should now have your attention every day. Feed regularly, and keep your porkers well supplied with muck and litter. A constant

and full supply of food is essential to making cheap pork. Is your piggery dry and warm, and luxurious in its clean rye straw?

A MULCH FOR THE STRAWBERRY BED.

We have found the hardiest varieties of this fruit to do better with a Winter covering. It should not be too thick. Leaves mat down so closely that under the snow they prevent all ventilation, and the vines are killed. Old bog hay, or straw, will answer a good purpose. Dry sea-weed is also an excellent covering. The boughs of evergreens, where they are convenient, afford a sufficient protection.

THE RASPBERRY CANES

are best protected by a covering of earth. This is so little trouble that it is not a strong objection to a good variety that is only half hardy or tender. He must be a lazy cultivator who grudges the trouble of putting a few inches of dirt upon his raspberry canes. The stools should be thinned out to about four canes. The smaller shoots may be taken up to make new plantations of, or to sell, or give away to your neighbors.

THAT ORCHARD

should certainly be planted this month. It is too bad that you had not the five hundred barrels of apples to sell this Fall, when they are in such demand. But it is never too late to learn, and you should learn wisdom now, and be ready for the next year of scarcity. They will always pay whenever you can get good fruit, and some years they will pay better than anything else upon the farm. Notice the often-repeated directions for tree-planting in the *Agriculturist*, and put out good sized, thrifty, well-rooted apple trees in your orchard.

THE ROOT HARVEST

should not be delayed much longer. Beets should go in immediately, and the mangel wurtzels, if you mean to keep them for Spring feeding. Carrots and ruta bagas should be harvested by the middle of the month.

SAVE THE SOOT.

This, though generally thrown into the street and wasted is one of the best manures. It is extensively used in England, and when only 15 or 20 bushels are applied to the acre, it induces the most luxuriant crops of wheat, and other grains. It contains, in small compass, almost all the ingredients of the coal or wood used for fuel. It also contains several salts of ammonia, magnesia, lime and muriatic acid. Its components are the natural food or stimulants of plants, and it can be used to great advantage as a concentrated fertilizer, to stimulate germinating seeds in the drill. It is not only sown broad-cast with the grain, but it is applied to the root crops with the best results. Potatoes and carrots, especially, are benefitted by it. Six quarts of soot to a hogshead of water make an excellent liquid manure for the garden. It can be applied with safety to all garden crops, and will pay well for saving. In putting the stoves, furnaces and fire-places in order for Winter, bear it in mind, that soot is valuable, and will be wanted for Spring use. One, two, three or more barrels can be saved easily in most families, especially where wood is burned.

LEAF MANURE.—The best manure, says Liebig,

for almost every plant is the decomposed leaves and substances of its own species; hence when the small onions or scallions, as they are called, are left upon the bed, and turned under the soil, they greatly benefit the succeeding crop. An annual dressing of salt in moderate quantities, sown broad-cast over the whole garden early in Spring, is beneficial, destroying the germs of insects and acting on the foliage of plants, retaining moisture, &c. Ten bushels to the acre will answer the purpose.

CALENDAR OF OPERATIONS.

NOVEMBER, 1857.

[We note down a summary of various operations, many of them very common ones, it is true, but a simple catalogue like this will often suggest a piece of work that would otherwise be forgotten. The Calendar is adapted to the latitudes of 39° to 45°. A little allowance must be made for each degree of latitude—earlier north—later south. This table will be made out anew every month, and adapted to the season of each year.]

EXPLANATIONS.—The letters, f. m. l., refer to first, middle, and last of the month.

Doubling the letters thus: ff., mm., or ll., gives emphasis to the particular period indicated.]

FARM.

Now that the crops are chiefly gathered, and the Winter cereals sown, it is time to cast about and see what permanent improvements can be made upon the farm, what can be done to forward work another Spring, and more than all, see whether anything is lacking to make stock comfortable during the approaching Winter. Look well to the

Barns and see if sufficient room is provided to shelter all cattle and horses at night, and during storms, with shed or hovel room for the sheep. Have racks so arranged that no fodder will be wasted either in the yards or stalls. Unless all the stock can be accommodated by buildings now up, construct a rude shed as described under this head last month.

Beeves—Hasten the fattening of those intended for the butcher. Do not wait until a large portion of the food is needed to keep up animal heat. With the corn or meal give pumpkins, beets, carrots and turnips.

Buildings of all kinds that were not closely inspected last month should be looked to now, and made storm and cold proof. Painting may very properly be done at this season.

Cabbages—Harvest the late crop before the ground freezes the roots in, and protect as recommended in the October number. See page 262.

Carrots—Dig ff. any remaining in the ground.

Cattle—As grazing food is fast falling, cattle look to the barns for a partial supply of what they must soon depend upon entirely. Remember that a long Winter is before them and only give them what they eat up entire, even though you may seem to have abundance. Use all decaying vegetables and their tops before they waste upon the ground. Milch cows should have a goodly supply of green food including pumpkins, turnips, beets, &c. to keep up the supply of milk. Every animal should come to the barn at the opening of Winter in good flesh. See that all are stabled at night and during cold and stormy weather.

Cellars are now receiving important stores. Protect them from frost by banking up, and secure the windows and door way, so that cold can not enter; but provide for suitable ventilation.

Cisterns—Unless already provided, lose no time in constructing for both house and barn. They are easily made and save abundance of labor and manure, to say nothing of broken bones on icy paths leading to the spring, pond or brook.

Draining is always in season, when the ground is not frozen or wet, until all swales, swamps, or low grounds are made the most productive portions of the farm. Attentively peruse the chapters on this topic, as they appear from month to month.

Fowls—Warm inclosures, sand or gravel, cooked vegetables, meat, grain and water are essentials for poultry during the Winter season, to keep them in a laying condition.

Grain—Thresh any omitted last month, and carefully save the straw for feed and bedding.

Hay and Straw—Cut as much of these as possible. When wet and mixed with meal or bran cattle eat the whole, where they would waste a part without being out. A straw cutters should be one of the indispensables of the farm.

Hogs—Bear in mind the advice of last month and complete fattening early. Cook the food in all cases where practicable.

Ice Houses—Build f. m.; directions for a cheap structure are given on page 251.

Leaves—Collect a good supply from the orchard and forests. They make excellent bedding for cattle, horses and hogs, besides being good manure. You can not get too many of them.

Manure—See that sufficient materials are at hand for making all the manure possible, a large amount of

Muck should be got out and stored under cover if possible, accessible to the stables and hog pens for free use during Fall, Winter and Spring.

Plow stiff heavy lands before the ground freezes, and leave them to be acted upon by the Winter frosts.

Roots—Complete harvesting f. m. before hard freezing. Gradually cover the root pits with more earth, and when the weather demands, close the ventilators at the top. See article on page 203 (Sept. No.) relative to their construction.

Sheep should now receive some extra feed although they still grub upon the hills and pastures. They go through the Winter much easier and with far less risk, when beginning it in good flesh. The buck may run with them m. l. if early lambs are wanted. At the North next month will be early enough.

Stack Yards—Instead of making them cattle yards, save time, labor, and your reputation for humanity by carting the contents to the barn and feed under cover.

Stone Fences may be built as long as the ground remains open.

Tools—Put away those not in use under cover, after coating iron and steel surfaces with the mixture recommended on page 228 of the October number. It is well to repair any needing it now, so that no delay will be necessary when they are wanted at a busy season, or put such where they will be sure to receive attention during Winter.

Turnips—Harvest Ruta Bagas m. l. or when the leaves begin to wilt.

Water Pipes—Give an extra covering l. where there is danger of freezing.

Winter Grain—Keep stock of all kinds from eating it off or trampling it down this month. A good coat upon the ground, as a mulch for protection during Winter, is valuable.

Wood—Look to the forests m. l. and collect all the 'down stuff' at the North and pile it easy of access when sledding comes on. It is much easier to collect it now than after deep snows have fallen. As a general rule the first snows of Winter are best to draw wood to the house.

ORCHARD AND NURSERY.

The early part of this month is a favorable season for setting out an orchard. Trees well set now will be ready in Spring to start at once into rapid growth. In the nursery the busy season of selling and replanting continues.

Apple Trees—Plant f. m. on dry, well prepared soil. **Cherries**—Plant as apple trees. If in exposed situations, it is better to defer planting till Spring.

Frozen Trees—Read directions for on another page. **Grounds** for Spring planting, both to standard and nursery stock.—Prepare f. m. instead of leaving till the busy season of Spring.

Manure grounds for Spring planting now, in preference to leaving them till they are planted.

Mice among Trees—Read under this head last month and act accordingly.

Nursery Rows—Turn a furrow with the plow towards the row upon either side and leave in this manner during the Winter, especially on wet ground. The dead furrows between the rows will serve as drains.

Orchards of old trees should receive due attention to prolong their usefulness as much as may be, or till the younger trees come into bearing. Scrape off the moss and rough bark, dig about and manure the roots, pruning the tops at a proper season and you give them a new lease upon life for which they will amply repay you.

Pack thoroughly those trees which are to be sent to a distance, using moss or moist straw for the roots, strapping and binding the tops with twine.

Pear Trees—Set out f. m. on dry soil.

Pruning may be done now but it is not the best season.

Quinces—Plant as Pears.

Seeds of Apples, Pears, Quinces, Plums, Cherries, Peaches, &c.—If not planted last month as there directed it can be done f. m.

Tender Trees and Shrubs will require some protection by the latter part of the month. Tall varieties may be bound up with straw or mats, and low growing trees or shrubs covered with boxes or barrels having holes in the top for ventilation.

Transplanting generally may be done in the early part of this month.

KITCHEN AND FRUIT GARDEN.

During the fore part of this month any crops not harvested should be secured, and everything done that may be to be early planting in the Spring. Look well to the

Winter protection of whatever requires covering, beginning with the

Asparagus Bed, which may now receive a coating of coarse manure and litter from the horse-stable, both to prevent frequent freezing and thawing, and to serve as a dressing to the plants.

Beets should have been harvested last month. If not already done, secure f. m. storing from frost.

Blackberries may be planted as long as the ground is open, but the earlier now the better.

Cabbages and Cauliflowers—Harvest the remaining crop f. m. and store for Winter use. Read article in present number, on this point. Those set in frames last month should receive air each day, if the weather is at all suitable, raising the upper edge of the sash. Cover with mats or straw before heavy freezing.

Carrots—Dig and store f. m. any remaining in the ground.

Celery—Harvest the remaining crop f. m. and protect as directed elsewhere in the present number.

Cold Frames—Attend to closely, giving air whenever suitable. If the weather is very cold towards the latter part of the month, do not remove the sash or other covering. In addition, spread over rugs, mats, or straw. It is not expected that frost will be entirely excluded, but avoid any sudden changes, and when the weather moderates allow the frost to come out of the plants before removing the covering.

Compost and Manures for Spring use—Prepare a good supply as opportunity offers.

Corn Salad—Thin, keep free from weeds and cover lightly with straw m. l.

Currants and Gooseberries—Plant both f. m. if not already done. Cuttings may be made and either kept for Spring planting or put in at once.

Drain stiff heavy soils, to facilitate early working in Spring. They may be planted a week earlier, if thoroughly drained.

Fruit Trees—These may be planted f. m. as referred to more fully under "Orchard and Nursery."

Garlic—Plant f. m. in preference to leaving it till Spring.

Grapes—Lay tender varieties upon the ground, and unless in some measure screened by buildings or fences, we prefer taking even the Isabella and Catawba from the trellis during Winter.

Grape Vines—Read descriptive chapter on.

Leaves of Trees—Collect a good supply for composting and for hot beds in the Spring. They make an excellent manure for the kitchen garden.

Lettuce—Expose that growing in frames to as much air as can be done with prudence, otherwise they grow with slender stalks and do not head well.

Mice—Allow no brush, weeds or rubbish to afford harbors for these. Set traps or introduce poison into the cold frames if they make an entrance there.

Mushroom Beds—Make f. m. and attend to former ones. Read the article on another page.

Parsneps—Harvest any time before the ground freezes, enough to last till Spring, and put in a barrel in the cellar, sifting in sand or dry earth until they are covered.

Potatoes should all be dug f. m. unless harvested last month. Keep from air as much as possible.

Raspberries—Transplant and set out new plantations f. m. Lay down and cover tender varieties before the ground freezes, cutting out any old canes and shortening in long shoots at the same time.

Rhubarb—Plant roots f. m. instead of waiting till Spring.

Salsify—Dig what is wanted before Spring and store as parsneps.

Spinach—Weed and thin previous to covering with straw for the Winter. See that no water will stand on the ground.

Squashes—Remove to a cool dry cellar before they freeze. Handle with care, and if properly managed they will keep till January or February.

Strawberries—Cover beds with straw, coarse manure or leaves m. l. Remove weeds and thin out now in preference to leaving a mat upon the ground till Spring.

Tools—Repair any needing it, and put away in their proper places in the tool house, those which are no longer needed this season.

Turnips—Harvest the remaining crop m. l. being governed by the season. Look to pits as the weather becomes severe.

FLOWER GARDEN AND LAWN.

The principal labors of the present season in this department will be taking in such roots, shrubs and flowers as will not withstand the frosts of Winter, and affording protection to some of the more tender ones which remain out; arranging and planting hardy trees and shrubbery both on new and old grounds; dressing the lawn and putting everything in neat order for Winter. Decaying flower stalks and rubbish of all kinds should be removed

both to present a neat appearance and avoid a harbor for mice.

Annuals sown last month—Protect by a slight covering of leaves or straw, or erect a cold frame over them.

Bulbs were probably planted last month in accordance with directions then given. If any remain out of ground, plant them f. m.

Chrysanthemums are still in bloom in many sections. Keep them tied to stakes, and mark those colors you wish to propagate. During the latter part of the month they may be divided and reset.

Dahlias and Gladiolas—If these were not all taken up last month, lift them f. m. and having attached wooden labels with the names and habits of the varieties to each, put in boxes of earth and set in a cool dry situation but out of the reach of frost.

Daisies—Cover f. m. with leaves or a frame.

Frames and Pits—Place the remaining plants requiring protection in these f. m. and secure them from freezing by extra covering as severe weather comes on.

Hedges—Plant buckthorn, althea, privet, &c. f. m.

Lawns—A covering of straw or sea weed will cause these to start fresher in the Spring, especially if they are new. Guano or bone dust may be washed in by the Fall rains.

Paeonies and other perennial herbaceous plants may very properly be divided and set out f. m.

Roses—Low growing tender varieties may be laid down and covered with earth m. l.

Shrubs—Plant f. m. those varieties alluded to last month, unless they were attended to at that time.

Stakes and Dahlia Poles—Collect and lay away under cover for future use.

Tigridias and Tuberoses—Lift and dry f. m. and store away from frost.

Trees—Plant shade trees f. m. about the yards and lawns.

GREEN AND HOT HOUSES.

These are now supposed to be full, and fire heat already in use for collections of tender and tropical plants. It is important that they suffer no check from a cool atmosphere which is sometimes allowed between the waning heat of an Autumnal sun, and the starting of Winter fires. It is also presumed that water pipes are used to generate heat, as these, after numerous and oft repeated trials, are almost universally decided to be the best.

Air all of the houses as much as practicable. Half hardy plants recently carried to the green house, especially need abundance of air while becoming accustomed to a change of situation.

Annuals—Commence potting those annuals which were sown last month, using pots large enough for them to bloom in.

Borders—Fork over f. m. working in plenty manure.

Bulbs—Place a quantity in glasses and put them in the green house f. m. A few of these may be brought to the hot house m. l. at intervals of a few weeks, to keep up a succession of bloom during the Winter.

Camellias—Syringe freely and wash any dust from the leaves.

Cisterns or Tanks—These should be in the rooms, and kept filled so that the temperature of the water when applied to the plants may be the same as the air of the room. Evaporation from these open cisterns assists in maintaining a humid atmosphere.

Fires—Keep these as even as may be, both by day and night, in the heated apartments. Avoid starting them among the more hardy plants of the green house unless frost is likely to enter. There is more danger from excess of heat when plants are first brought in than after they have become accustomed to their situation.

Insects—Keep down with syringe and tobacco fumes. It is far better and much easier to keep them in check than to exterminate them after they have got a strong foothold.

Leaves—Pick off all decaying ones, as they breed vermin and emit an odor offensive to growing plants.

Pots and Tubs—Examine and loosen the earth, where necessary, removing any moss growing upon the surface. Keep free from weeds.

Roses—Tender varieties taken to the border in the Spring, should be returned to the house f. m.

Shutters—Put these in the hot house each night when there is appearance of heavy frost, removing them after the sun is up in the morning.

Temperature—The different houses and rooms must be regulated in point of temperature by the collections they contain. With hardy vines and shrubs requiring only the partial protection of a green house, the temperature may range from 40 to 50 degrees, while the different forcing houses should range from 55 to 70 degrees, and even 80 degrees will not be too much for the tropical house.

Water moderately, excepting in the most heated rooms. Bulbs especially need very little water at this season. Succulents need be watered only once or twice a week. The fore part of the day is now the best time to apply it.

WHAT OUR AGRICULTURAL JOURNALS ARE DOING.

It is the weakness of all callings, perhaps, to magnify their office. In no case is there more occasion for "making a fair show in the flesh" than in that of the agricultural press. There has been in the last ten years an unprecedented improvement in all our farming interests. Even while the Eastern States have been depleted of their wealth and population by emigration, and thousands of men and millions of money have gone West, there has been a steady increase of population, and a larger addition to the annual productiveness of our farms, than was ever known at any former period. This is seen and understood in many small districts by men who are making improvements in husbandry themselves. This increase in the aggregate for the Eastern States must be enormous.

In the model State of Massachusetts, they take more pains to ascertain the statistics of their industry than elsewhere, and from their last returns for 1855, we are able to form some correct idea of the progress husbandry is now making all through the older States. The Governor, in his late message, compares the returns of 1855 with those of 1845. He finds the annual value of all the industrial products of the State have been more than doubled in this decade. The increase in the department of agriculture is still more marked. The value of these products in 1845 was \$26,234,453, and in 1855, \$62,853,488. The increase in these and other industrial products of that State was one hundred and thirty-eight per cent., while the increase of the population during the same period was only thirty-four per cent.

This shows a great advance, and gives us very brilliant hopes for the future of American agriculture. The increase in the productiveness of farming in Connecticut and Rhode Island has, we think, been quite as large as in Massachusetts. In the remainder of the New-England States, and in the Middle States, it has been rapidly improving, and for the next ten years, we think, will compare favorably with the model State.

There are doubtless a variety of causes contributing to this large increase in our agricultural products. But underlying them is the agricultural press, stimulating the people to form Farmers' Clubs, and State and County Societies, for the exhibition of all farm products; and then multiplying the power of these societies for good a hundred-fold by spreading their proceedings before the community; scattering broadcast the experiments and the teachings of hundreds of our best practical farmers; publishing to the world accounts of the best stock, the best tools, and the best fruits and vegetables. These noiseless labors of the press are doing a great work upon the farm, and we are but beginning to see the results of an improved husbandry upon our soil. Could we look at this matter in detail, we should find that nearly all this increase of productiveness is in those districts where these journals have the largest circulation, and that that soil yields most abundantly that has the most

intelligent labor bestowed upon it. It is a comfort to know that this once-despised book-farming has added thirty-five millions to the annual agricultural products of a single State.

ACCOMMODATION FOR HORSES.

Now that the Winter is approaching, we have a few words to speak in behalf of that noblest, and most abused of our domestic animals, the horse. That sign, which used to hang out upon country taverns of the old school, "Accommodation for man and beast," was usually a great fraud upon the public, at least in the latter part of its promise. The accommodation for the horse was generally a narrow stall, in an over stocked stable, with a hard plank-floor, and a mere apology for a bed of straw. Here, after a long day's work upon the road, old Dobbin was expected to refresh his weary limbs. The thing was impracticable in that atmosphere, foul with the breath of twenty other tired horses, and with the effluvia of ammonia coming up from the saturated floors; and upon those hard planks, where the weight of the horse made a firm pressure upon the wearied muscles, as he lay down to sleep. There was no chance for that relaxation of the muscles, which is as necessary to the brute, as to man.

At home, the horse was little better off, except that the stable was not full of horses, and he had a better atmosphere to breathe. There was the same hard bed, and the same pungent smell from the filthy floors. Not one horse in a hundred is properly accommodated in the Winter. In the Summer when turned out to pasture, they resume their natural habits in some measure, and regain that health which is so often lost in their Winter confinement. The benefit of the Summer pasture, which is universally conceded by all who have any acquaintance with this treatment, is not more owing to the change of food, than to the change of atmosphere and bed. The horse, in his native condition, breathes the pure air of the prairies, and has under his hoof continually the soft turf. When he lies down, it is upon a bed of grass which yields to the pressure of his body, and puts every muscle at ease.

Now, we believe, that all the conditions of the pasture, can be supplied to the horse in his stable, and that he can be kept in the highest health and spirits, in the barn, the year round. We speak now of horses upon the farm, where green fodder is accessible for a part of the year. In the city though their condition might be ameliorated, it can not be entirely remedied. Nature gives us the needful hints, if we will but heed her voice.

The horse can have as pure wholesome air in the barn, as he has upon the prairie, without any exposure to the keen winds and storms that assail him in his natural state. Barns are generally constructed, without any attention being paid to ventilation. The walls are nearly tight, and not unfrequently the supply of hay is stored in the mows over the stables, so that all the foul odors, escaping from the lungs and bowels of the horse are absorbed by the hay, until it becomes unfit for food. He is compelled to breathe over, many times, this foul air, and finds no relief except when he is taken out of the stable. Is it any wonder, that horses become diseased under this treatment, and die prematurely?

A barn should be constructed with ventilators, of a size corresponding to the number of animals it is designed to accommodate, so that the air will be changed as fast as it is breathed. This can be done so that the animals will not be exposed to currents, or suffer from any undue degree of cold.

Again we can prepare a bed in the stable quite as comfortable, as any the horse finds in his grassy pastures. The best bedding we have ever found for a horse, is a coat of dry peat, muck or soda, covered with straw. It should be a foot thick, and the drier the better. This makes a soft warm bed, and while it accommodates the horse in the best manner, it furnishes in the course of the year an enormous quantity of manure. The straw, and the solid feces are removed every morning, and all the liquid is immediately absorbed. The stall should be at least six feet wide, and about a half cord of muck will make a good bed. This will last nearly two weeks before it becomes so saturated as to emit the smell of ammonia. A horse stable should always be as sweet as a parlor, and it is a constant waste for a man ever to have it otherwise. Of course, it requires more labor to furnish a horse with these accommodations, but we know from our own practice of several years, that the labor is abundantly paid for, not only in the health of the horse, but in the manure made by this process. We are confident that no farmer, who adopts this plan and learns its advantages, will ever abandon it.

We have lately seen stables constructed with deep cemented pits under the horse, instead of a plank floor. The pits were four or five feet deep, and would hold perhaps two cords of muck or loam. They were filled with loam to the ordinary level of the floor, and the horses stood directly upon the loam, having a bedding of straw, of course, at night. The advantages of the pits are, that they save the expense of flooring, and the muck does not need removing so often. Such stables, of course, have to be upon the ground floor of the barn, and can not be had in all cases.

The bed of muck well covered with straw, and the ventilation, are the things of chief importance, and these are within reach of nearly all farmers. Attention to these things would add greatly to the power of their horses, and to their own pecuniary advantage.

SMOKY CHIMNEYS.

Next to a scolding wife, a smoky chimney ranks first among domestic annoyances. It will bring tears into the eyes even of those "unused to the melting mood," quicker than almost any other evil. And yet it is no uncommon thing to meet with such chimneys. You see the signs of them in the ugly ventilators, cowls, smoke-jacks and other paraphernalia which disfigure so many houses in city and country. Ask the masons the cause of their smoking, and one will lay it to the shoulder of a neighboring hill, another to a peculiar current up the valley, and another to the unfortunate situation of the house with respect to the points of compass.

But is there not some known method of building chimneys so that they will ordinarily have a good draft? Yes, there is. Smoke being warmer and therefore lighter than the surrounding air, tends to rise, and it will rise, unless it meets with some obstruction, until it becomes as cold as common air; then it will stop. One principal use of a chimney is to keep the smoke warm and so promote its ascent. If a flue is built of uniform size from bottom to top, it will draw well in calm weather because it meets with no obstruction. But when gusts of wind blow around it, and down it, what shall hinder its smoking? The blow which a flaw of wind strikes on the top of an ascending column of smoke, is felt throughout its whole extent, and must cause it to puff out at the bottom into the room. Yet this difficulty can be remedied, at least in a great measure. Contract the flue just over the fire-place, where the draft is strongest, by throwing out a shoulder

from the back of the chimney, about one-third the depth of the flue. Let this shoulder *always be flat on the top*. Masons often err in making it sloping. This shoulder will offer great resistance to the pressure of any gust of wind on the top of the chimney, and so prevent the regurgitation of smoke into the apartment. If the top of the chimney also is contracted, it will help the matter by diminishing the surface on which gales of wind can act. The rule of architects is, for very windy and exposed situations, to draw in the top courses to "a third less than the area of the flue." Ordinarily, it is sufficient to contract the flue at the bottom.

MECHANICAL PREPARATION OF THE SOIL.

NO. VII.—DRAINING.

[Continued from page 222.]

The width of stone drains will generally depend upon the ease of digging, and the abundance of materials at hand for filling. In a soil filled with boulders, or large stones, it is necessary to dig the drain pretty wide, so as to be able to get out such stones easily, or to leave them projecting from the sides, without closing up the drain too much. As the *drawing* power depends more upon the perpendicular surface of the stone-filling than upon the width of the drain, the narrower it is made the better, since less material will be required for filling, and more can be appropriated to depth. A drain four feet deep and two feet wide, is vastly better than one two feet deep and four feet wide, while both require precisely the same bulk of earth to be thrown out, and of stone for filling. Sufficient width for the convenience of the workman while digging, is required. If the soil be moderately free from rocks or boulders, and the filling stones be small, a convenient size for a drain like figure 18, will be 14 to 18 inches wide at the top, and 5 to 8 inches at the bottom, depending upon the depth, and the abundance of filling material. For the forms shown in figures 16 and 17, (page 222,) the bottom width must depend upon thickness of the flat stones used.

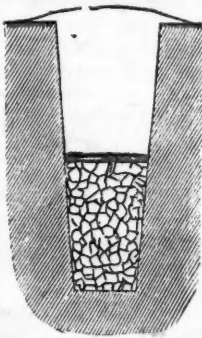


fig. 18.

The size of stones used for filling.—The smaller these can be made, the better will be the drain. Larger stones have larger and fewer cavities between them, which are more liable to be used as burrows for animals, and to be filled up by falling or washing-in of earth. Experience has shown, we believe, that coarse gravel, and stones not more than one to three inches in diameter, are much better than those larger.

We have spoken of covering over the surface with turf, straw, &c. A much better plan would be to pass the stony materials over a fine sieve, and separate the fragments of not more than half an inch in diameter, and use these as a final covering to the stones, before putting on the earth. Vegetable materials soon decay, and often wash down and fill up the cavities. In all cases it is better to put the coarser materials at the bottom.

Expense of Stone Drains.—We have accurate tables of expenses of such drains in England and Scotland, but, owing to the difference in price of labor, &c., these furnish no guide in this country. It will readily be seen that the character of the digging, the depth of the drains, the facility of getting materials, &c., will vary much in each locali-

ty. The expense will, in general, be found less than would be expected. We have seen, in this country, men digging drains, to be filled with stones, for 12½ to 18 cents per rod, where the drains were from two and a half to three feet deep. (The present season is a favorable one for digging drains. The "hard times" have thrown thousands of persons out of employment, and it will be an act of mercy to set a multitude of destitute men to digging drains in almost every part of the country, even if they be paid no more than board and clothing. Even this hard alternative is preferable to absolute want and starvation.) In some places, the filling has been reckoned at nothing, since the drains formed convenient receptacles for depositing stones that were otherwise in the way. We think that where the stones cannot be procured and put in for 20 to 30 cents per rod, these will not be found as profitable as tiles, especially for small drains.

TILE DRAINING.

As previously hinted, we are confident that before many years elapse, a general system of *Tile Draining* will come to be considered one of the most important agricultural improvements of this country. This is the case now in England, and many thousands of miles of tile-drains are spread like a net-work over, or rather under, what are now the most productive and most profitable lands devoted to tillage. Even allowing for the present difference in the cost of labor, and the price of land and its products, it cannot be otherwise than that an operation which has proved of such immense advantage to that country, will be found proportionably useful here. It is to be remembered that if, after allowing a little for difference in climate, and comparatively but little, our soils, our crops, and our modes of culture, are essentially the same as in Great Britain. Too much stress is usually laid upon some supposed difference in these respects, and it is ignorance on this point that leads many persons to cry out against any suggestions drawn from our trans-Atlantic brethren of the plow. Let it be kept in mind that the composition of good soils is essentially the same the world over, and the same crops require in every place similar soils, manures and general treatment.

DESCRIPTION OF TILES AND TILE-DRAINS.

Although, even in this country, much has been written in reference to tile-draining, comparatively few persons have ever seen specimens of the tiles themselves. They are made of the same material as bricks, the clay being similarly prepared and burned. A common brick, with a hole through it lengthwise, or with a hollowing out, or gutter open on one side, is essentially a drain tile. As usually made they are in one of three forms, and are called respectively, *horse-shoe tile*, *sole-tile*, and *tubular tile*. They are made from 12 to 15 inches in length, and from 2 to 8 inches, outside diameter. The internal diameter is from 1 to 2 inches less than the outside, which leaves the rim from ½ to 1 inch in thickness—the thickness depending upon the size of the tile, and the consequent strength required. They are made very rapidly by a simple, cheap machine, costing from \$100 to \$250. (If we can procure a drawing, we will present an engraving of one of these machines in a future number, and describe the mode of manufacture.) The form of tile first adopted was the following:

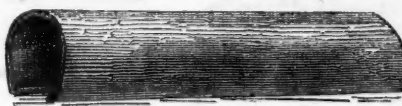


Fig. 19.—HORSE-SHOE TILE.

It is named from the resemblance of the

opening to a horse-shoe. This form was preferred for a time, but is going out of use. The thin edges upon which it stands are apt to sink into the earth. To avoid this they are sometimes laid down upon thin boards which last until the soil underneath and around them has become thoroughly settled and hardened. The more common method, however, is to place under them a thin brick sole-tile as shown in the next figure:

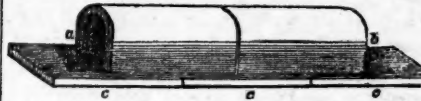


Fig. 20.

The soles, c, c, c, are first laid in the bottom of the drain, and the horse-shoe tiles, a, b, are so arranged as to break joints.

The end of the drain is shown in figure 21, where the tile is surrounded with a little earth. A main objection to this form of tile is the greater expense of having two sets of tiles, and the additional trouble of hauling, handling, &c. The chief advantage of this form is, that the openings along the edges admit the water more freely, than in a tile entirely closed on all sides, but we shall show further on, that this is not needed.

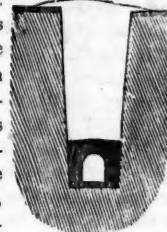


Fig. 21.

An improvement upon the horse-shoe tile is the attachment of the sole directly to the hollow tile, at the time of making, or in other words, making a tube with flanges or lips upon each side of the bottom as shown in the next figure:

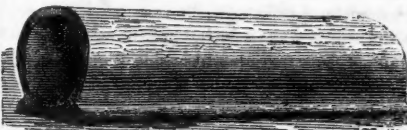


Fig. 22.—SOLE-TILE.

This is the form now generally adopted, and the only improvement we can suggest, is to make the lips or flanges at the bottom a little wider than they are usually manufactured, so as to give a broader flat base to rest upon. One other form of tile is sometimes made, which is a simple round tube as here shown:

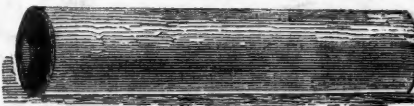


Fig. 23.—TUBULAR TILE.

These are not much used, except for very large drains, where the size of the tile itself gives sufficient base to rest upon, without the necessity of adding the flange. Whenever the diameter is less than six inches, it is preferable to add the sole as in figure 22.

LAYING THE TILE.

The size, place, and best mode of digging drains will be discussed hereafter. To lay down the sole-tile, fig. 22, they are placed in the bottom of the drain, end to end, so as to make one continuous tube through the whole length. As they are laid down, they should be secured firmly in their position by little stones wedged in upon their sides; and they should also rest upon a firm bottom, so that the openings of the successive pipes always meet exactly together. We strongly recommend to put in a thin narrow board the whole length of the drain, and to place the tiles upon this. This board will cost very little, and

with proper wedging upon the sides, the tile will not be moved out of place either in a hard or soft soil. We recommend putting in this narrow board even in the hardest soil, for the occurrence of any soft spot in the soil, however small, may cause a single tile to settle a little at one end, and thus close up the perfect continuance of the tube, and spoil the entire drain.

Many recommend using clay collars over the joints, where the ends of the tiles meet. This will prevent their being displaced sideways, but will not keep them from settling unequally, which is a more frequent cause of failure. Laying in boards will also be found much cheaper than using collars, for any rough, knotty boards, or thin slabs will answer, as only a continuous upper surface for the tile to rest upon is required. With these boards, less care will be required in cleaning out the bottom of the drain, since the boards can be laid in and soon levelled down by striking them with a heavy block. Long before these boards can decay, the tile will have become so thoroughly imbedded in the surrounding soil, that there will be little danger of future displacement. Except in very soft, spongy soils, where the permanent use of thick boards will be needed, the thinner the boards the better, since their decay would produce less sinking of the tiles, if any take place—their chief object being to keep the tiles in position until the drains are filled and thoroughly settled. In some localities slate or thin flat stones are abundant, and these may be substituted for boards; and they may even take the place of soles if horse-shoe tile are used.

When these tubes are thus arranged and firmly wedged in upon the bottom, the next process is to refill the drains. If in digging, any gravelly materials have been thrown out, these should be put directly upon the tile, and the rest filled up with the soil. It is always desirable to have as thick a bed of porous materials as possible directly upon and above the tiles. Some recommend to cover them first with grass, turf, straw, &c. These answer a very good temporary purpose, but it is doubtful whether the ultimate decay of these may not clog up the tiles. A covering of gravel or fine stone upon and around the tile is far preferable. The soil may be thrown back into the drain with a shovel, or more economically still by a plow, with a double tree of 9 or 10 feet, so that it may be drawn by two horses, one walking upon either side of the drain. The earth should be rounded up a little over the drain, to allow for settling. A section of the drain thus completed is represented by 21, though in this figure the tile is not of the round form.

The most perfect mode of constructing a drain is that shown in fig. 24. Here we have in the bottom a drain-tile *a*, of any form, round or horse-shoe, and over this a bed of stones of five, ten, or fifteen inches in thickness, and the common soil to fill up the remainder. If stones are thus put over the tiles they should be laid in carefully, to avoid breaking,

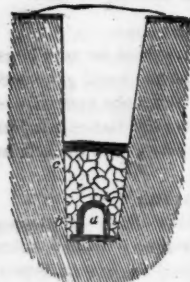


Fig. 24.
or cracking the tiles.

But this addition of stones is not necessary. If there is an open passage 2½ or 3 feet below the surface, the water level will not long remain above that point, even in the most compact soil. This is abundantly proved by the fact that a hole dug into the stiffest wet clay, will speedily fill with water, which would not be the case, if the water

could not readily make its way in from surrounding points.

Again, many persons on seeing sole or pipe tiles laid down with the ends put closely together, have their doubts whether the water will enter the drain with sufficient freedom. A little consideration will settle this matter. The truth is you can not keep the water out of a tightly laid tile drain, for however near the ends may be together—and they should always be closely laid to keep earth from falling or being washed in—there will still be seams enough in the course of a few rods to admit all the water the drain can carry off. But suppose, for illustration, that it were practicable to make each piece of pipe-tile ten feet in length, the water would still enter freely by passing directly through the substance of the tile. They are of the same material as bricks, and we well know that an unglazed vessel of brick would not hold water; on the contrary, the liquid would speedily pass through the open pores and ooze out upon the bottom. So the water will settle into a tile drain passing directly through its sides.

When a great amount of water is to be carried off from a field, or a main drain is required, it often becomes necessary to use very large tiles. In

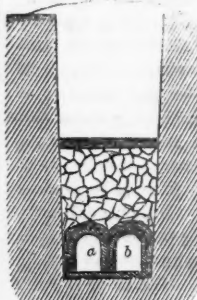


Fig. 25.

such cases it is frequently more economical to use two smaller tiles *a*, *b*, side by side. Large tiles are different to manufacture and to handle. The cost of two smaller tiles is little more than that of a single large one of the same capacity; and there is this advantage in the use of the two smaller ones, that they not only assist in keeping each other in place, but when there are two distinct tubes there is less chance for absolute failures, for should one by any chance give way there will still be one left. Expense in digging

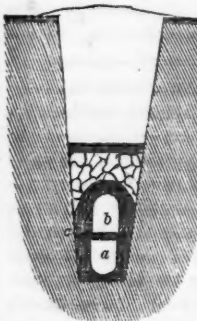


Fig. 26.

may be saved by leaving the bottom of the drain narrower than in fig. 25, and placing one tile over the other as shown in fig. 26. If horse-shoe tiles be used, only one flat tile will be needed between *a* and *b*. A large sole-tile might be placed below, bottom upwards, and a horse-shoe tile *b* be set upon it, though two sole-tiles with the flat

sides together would form the firmest drain. We have for convenience in the use of illustrations, in the foregoing as well as in the next figure, shown only the horse-shoe tiles, but the same description holds equally good for the sole tile, (fig. 22) which we consider preferable.

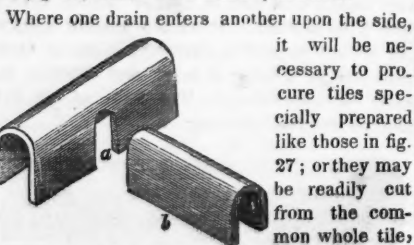


Fig. 27.

Where one drain enters another upon the side, it will be necessary to procure tiles specially prepared like those in fig. 27; or they may be readily cut from the common whole tile, as they are as easily worked into shape as common bricks.

Tiles, of whatever form—sole, horse-shoe, or pipe, should be well made. They should be smooth on the surface, and ring like cast iron when struck with the knuckle. If overburned, they are liable to crack and break, and if under-burned, they become soft and spongy, and fall in. There is considerable variation in length in this country, some being fully fifteen inches long, while others are but twelve inches. The short tiles are preferable, if proportionably cheap, and buyers, in ordering, should always stipulate for some particular length. Two factories were recently selling two-inch pipe-tile, the one at \$10 and the other at \$12 a thousand; but on measuring, we found their lengths respectively twelve and fifteen inches. Those at \$12 and fifteen inches long were of course the cheapest.

The smaller size of tiles are now sold for \$10 to \$18 per thousand in this country, or at the rate of fourteen to twenty-five cents a rod; and they will continually become much cheaper. As soon as the advantages of these tiles become known, so as to create a demand for them, machines for their manufacture will be introduced into brick-yards generally in the older parts of this country, and the cost of transportation will be greatly reduced. In England where labor and coal for burning are cheap, and the manufacturing is carried on upon a large scale, they are often sold at the kilns as low as \$2 00 to \$2 50 per thousand. We shall hereafter have more to say on the machines, and modes and cost of manufacture. With a suitable machine they can be readily made at any brick-yard in the country.

A PRACTICAL DRAINER'S SUGGESTIONS.

Mr. W. L., of Fairport, Chemung Co., N. Y., writes: I use horse-shoe tile if the bottom or sub-soil is hard enough, and pipe tile if it is sandy. If in quick-sand I lay boards under the tiles. After the tiles are laid down I cover them with three or four inches of clean coarse gravel, so as to entirely surround them, except underneath. One load of gravel covers about a dozen rods. I would suggest that a drain of 2½ or 3 feet in depth, if filled in with a close, tight sub-soil, and covered with the soil as thrown out, will defeat itself, by being below the course of the water. A more shallow drain, or one filled with gravel to the top of the sub-soil, would answer a better purpose. I would also suggest that a wet spot may be effectually drained by a single ditch across the upper side, or where the water begins to ooze out of the higher ground, thus cutting off the water forced to the water surface, and compelled to work its way through the soil till it finds a more porous sub-soil. . . . We omit remark here, as these points are being discussed in our articles on this topic.

POULTRY—PREPARING—KILLING—DRESSING—MARKETING.

Preparing.—Make them fat. A grain-fed, plump, fat fowl will sell for double the price per pound of a lean one. A liberal feeding, for a few weeks before killing will nearly double the weight and double the price, making a quadruple return for the finishing off food.

Killing.—Keep them from bruising themselves. Secure the wings the instant they are caught, and tie them behind the back. Tie the legs together, hang them upon a pole, and then cut off the head with a sharp knife, leaving as long a neck as possible. Let them hang until they bleed clean. Keep them from food for two or three hours before

killing. Any grain left in the crop sours and materially injures the flesh if kept long before cooking.

Dressing.—Pick them dry, taking particular care not to tear or bruise the flesh. If scalded at all let it be done quickly and in water not quite boiling hot. Be careful not to rub off the outer thin skin from the legs. If not to be packed in boxes, after picking dry or scalding, wash them in clean warm soap-suds, and "plump" them, that is hold them in boiling water about five seconds. If to be packed for carrying a long distance do not wet them at all, except to wash the neck. Strip back the skin on the neck, cut off the neck bone, draw the loose skin over, tie it tightly, cut off the bloody portion a little way beyond the string and wash off any blood, wiping dry. This will keep them clean and bloodless, and increase their saleableness.

Marketing.—Let them hang until entirely cold, and then pack in rye-straw if it be obtainable, putting them into boxes holding not over 200 pounds. The packing straw should be bright and clean, and it will be greatly improved by drying it in a warm oven before using. Put straw between the carcasses, and around the sides of the box—enough to act as a spring to prevent bruising, and pack straw closely under the cover. A little care of the kind described above will greatly increase the market value. Most persons keep back all their poultry until Christmas or New-Years day. This is not always the best policy. We have noticed for several years, that poultry is scarcest and highest here for a few weeks before the holidays. This will be the case this year. There will not be half the usual demand for turkeys and other fowls at Christmas, because a majority of families are economizing, and there will be a great decrease in the number of the lower classes who can afford to buy poultry at all, unless it happens to be the cheapest food in market. As soon as settled cold weather arrives, poultry if dressed and packed as above in tight boxes, may be sent from the most Western States to this market. Contract for the through expenses and send to some reliable commission dealer who will take the packages in charge on their arrival, and dispose of them at once. If you do not know of any other person here to entrust them to, we think you can rely upon ISAAC EMENS, 226 Front-st. We only know of him, that several of our acquaintances have sent poultry to his care and have been pleased with him. There are many others equally reliable for aught we know.

LOOK OUT FOR WINTER.

The falling leaves remind us that the cold and stormy months are nigh at hand—are even here. Silently, but steadily and surely, the seasons revolve, each bringing its peculiar pleasures and duties. The boys throughout the country, we take it, are now enjoying themselves in gathering chestnuts, beechnuts, butternuts, walnuts, and the like, for their consumption during the long Winter evenings. Farmers and provident housekeepers generally are storing away in their cellars, apples, Winter-pears and vegetables, and supplying their barns and sheds with all things needful for the health and comfort of their stock.

Alas! we fear we must recall the last statement, or modify it somewhat. There are farmers who neglect some of their duties at this season, and need an occasional prompting from their neighbors or from the agricultural press. To such we say, Look out for Winter! See that your barns are in complete repair. It is economy to spend all needful time and labor in doing this. All domestic animals, as you know, must keep up their vital heat by some means, to about 100°, and this can be done wholly by consuming food, or in

part by food, and partly by shelter. If they are left out of doors, or kept in dilapidated stables, they will have to eat much more to keep themselves warm than if they were comfortably housed. And besides, a uniform temperature is healthier for animals, as for men, than a changeable one. It is great folly to keep stock out of doors in Winter for the sake of "hardening" them.

Our exhortation, then, is to give horses, cattle, sheep, and even pigs and poultry, good Winter quarters. Those which are fitting for market, will of course need more shelter and care than others which are simply being wintered over; but all should be made comfortable. Battens should be nailed over the cracks on the exposed sides of the barns, every loose board should be tightened, and double walls in the immediate neighborhood of the horse-stalls would not be labor thrown away.

Then, as to fodder, see to it that you have enough. Short commons in Winter is no mark of good farming. Pinch yourself, rather than your stock. To make food go a great ways, provide yourself with a straw-cutter. Corn-stalks cut fine will be eaten up to the stubs by cattle; and straw, clover and coarse hay, will be eaten much cleaner than if fed out uncut. They will also be better digested. If grain or meal of any kind is mixed with the cut food, it should always be moistened with water. Apples, carrots, turnips, potatoes, &c., should be kept on hand, and fed out at intervals in the Winter. The dumb beasts relish these dishes exceedingly, and every true farmer can read their satisfaction in their expressive faces, and such reading does him good.

THE AGRICULTURAL SHOWS.

We have found time to visit a few only of the State and County Agricultural Exhibitions, but these have been quite sufficient for the present year, and for all time to come, unless they are to be differently conducted hereafter. From the representations held out previously, and from the modified tone of the "announcements," we hoped our agricultural gatherings would this year be something more than regularly organized Horse Races, with a few extras thrown in, such as cattle, horses, sheep, swine, grain, vegetables, implements, &c., just to give an agricultural coloring to the affair, and to draw out the exhibitors of such useless things, together with their families and—their "quarters." But we confess to disappointment. With a few honorable exceptions, so far as we have witnessed and heard from, the principal attractions of the so-called Agricultural Exhibitions this year have been the exciting scenes upon the circular track. We appeal to those who have been at most expense and trouble in getting out their farm and garden products on such occasions, to say whether they have not invariably found that their animals, grain and fruit, &c., have not been almost entirely neglected except by a few early or late straggling visitors, and simply because during the middle of each day, when nine-tenths of the people visit the grounds, their whole attention has been drawn off to "trials of speed." The principal expense and the best ground has been devoted to the track, the seats have all been arranged there, while the really important things exhibited have been literally crowded into the narrowest compass, in some out-of-the-way corner, tent or building.

We approve of the exhibition of horses; we fall behind none in our admiration of that useful animal; we believe speed to be one of the good qualities of horses designed for some kinds of employment; but how improvement in speed even is promoted by the race course, as usually con-

ducted, is rather more than we can understand.

We have no sympathy with the race-course in any shape; we cannot see anything admirable in the spectacle of two or more horses on a track whipped and goaded to the utmost, by human-monkey riders in jockey caps. If others enjoy such sport, let them seek an appropriate time and place. We claim that they have no right to introduce such sports, surreptitiously or otherwise, upon grounds set apart for the exhibition of the products of agricultural skill and industry. Not one farmer in ten thousand is a raiser of fast horses, and not one in five cares for them. Horses should be exhibited at agricultural fairs, and their speed and even "bottom" should be shown, but this should be done singly. They should be exhibited and ridden by their proper owners (or those who raised them), dressed like human beings—not by the aforesaid human-monkeys in jockey caps.

We have hitherto urged farmers to turn out with their wives and children, and go up to these festivals; but unless there be, hereafter, some sure guarantee that their sons and their daughters are not to be initiated into the mysteries of the race-course, with a taste therefor stimulated and developed, we feel it to be our bounden duty from this time forth to do what we can to discourage all future attendance upon any such gatherings. We have not done with this subject.

SUGAR FROM WATERMELONS.

A friend has shown us a private letter, dated Sept. 4th, from a brother in San Francisco Co., Cal., from which we make the following extract. "I intend presenting (to the Mechanics' Institute of San Francisco,) some specimens of syrup and sugar from the watermelon. I consider this melon as the best source of syrup that has ever been tried—far more convenient than the cane or beet. All that is necessary is to press out the juice and boil; then strain through flannel, and evaporate to a proper consistence. One gallon of juice from the pulp yields one pint of syrup or three-fourths of a pound of sugar." We are promised further particulars which will be given to the readers of the *Agriculturist*.

REMARKS.—If half that has been said of the enormous growth of watermelons in California and also in Kansas be true, there may be some plausibility in the idea of making watermelon syrup and sugar profitably. Even in this vicinity, on Long-Island and in New-Jersey, they are grown of enormous size and in great quantities—at the cost of one cent each, it has been estimated. In Vol. XIV at page 250 we published the following item:

A correspondent writes: "I endeavor to raise a good watermelon patch. They are a healthy and delightful fruit. I cultivate the *Icing* variety; plant early in May, and again towards the close of the month, so that they may come in succession. When they begin ripening we commence cutting and using them freely during the hot weather. When the weather becomes cool in September, we bring a quantity of them to the house, split them open, with a spoon scrape out the pulp into a colander, and strain the juice into vessels.

We boil it in an iron vessel to a syrup, then put in apples or peaches like making apple-butter, and boil slowly until the fruit is well cooked; then spice to the taste, and we have something that most people prefer to apple-butter or any kind of preserves. Or the syrup may be boiled without fruit down to molasses, which will be as fine as the sugar-house molasses. We have made in a single Autumn as much as ten gallons of the apple-butter (if I may so call it) and molasses, which kept in a fine condition until May."

RURAL SURROUNDINGS.

NUMBER VIII.—PEACOCKS—GUINEA HENS—

RAT TERRIERS.

It is high time we close our already numerous catalogue of country companions in the way of beasts and birds. Yet, we can hardly do so, in justice to our own long associations with a few creatures not yet described, without naming them. In our list of poultry we have omitted two very beautiful, and we may as well add, compared with those we have described, very useless birds, for all the real utility there is about them. These are the Peacock and the Guinea hen. Every one who knows much about poultry, knows what they both are, and a description of either is quite unnecessary. In form and plumage, although exceedingly unlike, they are both rare birds to look upon. Shy in manner, with an ugly vain or vicious temper towards all other fowls, and no particular affection for humanity itself, there is little to ingratiate them with their keepers beyond the variety they give to the poultry yard, and the luxurious plumage which decorates them. We have kept them many years. We keep them still. We have discarded them sundry times, after they had sorely tried our temper, and exhausted our patience with their mischiefs, and their vices. Then relenting, and yearning towards them as a parent yearns towards an undutiful child who has some redeeming traits of character—the comparison is scarcely a proper one, but we will risk it—we again took them into our keeping, yet not into our confidence. We tolerate them, only. Pugnacious, noisy, rude and cowardly, they are a perpetual pest to all the well regulated poultry on the place, and we shall refrain from giving any directions about their breeding and rearing, not wishing to multiply races of birds, not decidedly useful on the farm. We therefore refer you, indulgent reader, to the book authorities, where you will find out pretty much all worth knowing of the Peacock, and Guinea hen; and what the books don't tell, you will find out fast enough yourselves, when you have had the birds six months on the farm in daily hostility with the other feathered families of the establishment.

THE BLACK AND TAN, SMOOTH-HAIRED TERRIER

Is among the most useful of the pets we associate with in our rural occupations; and we can not forego paying our grateful tribute to his useful, and agreeable qualities before closing our family schedule. These active and sagacious little dogs are the most inveterate exterminators of all predatory vermin that we have yet had about us. Small in size, active and expert in movement, sagacious in understanding, and kind in disposition, they embrace all that is really useful in the way of a farm-dog. They are true, and loving in disposition, yet exceedingly watchful of every thing in, or out of doors, with an instinctive hatred of rats, mice, minks, weasels, and every other pest which prowls about the premises. With an unflinching courage they attack everything offensive. Yet they are affectionate, loving and constant to the family with whom they associate, familiar with the children, if there be any about the house, and companionable in every way that a dog should, or need to be. In size they run from ten to twenty-five pounds. Some are very diminutive, not weighing over six pounds, and quite good rat-terers at that; but such size is too delicate, running frequently into effeminacy. A first-rate rat-terer should not be less than fifteen pounds in weight, and of active shape and proportions.

Some people have a vile habit of cropping their ears, and tails, "to make them look smart," as they say. But such cropping injures them in hearing, eyesight and running. We have tried the whole thing, and know it to be so. The ears and tail of a

terrier, should be left as nature made them, a protection to their hearing, and a guide for their turning in the chase.

We can not go into the mode of breeding, and training the terrier in our limited space. The dog books will tell you of these, and there is, also, a chapter on dogs among the last pages of Allen's Rural Architecture, giving all the information concerning the terrier which is required for practical uses. With this reference we leave him.

WHAT OF THE "TIMES?"

Like most of our subscribers living in the country, we "read the papers," and from these, more than from any other source, have we learned that there has been a "terrible financial crisis." We have heard that New-York city is bankrupt; but though we go daily from our quiet country home to our office, which is located in the midst of great blocks of heavy dealers in various kinds of merchandise, we know not of half a dozen business houses in our part of the city that have "suspended," "assigned," or "failed." We deposit money in our good old bank, and when wanted, draw it out either in bills or in specie, as may be desired; and although it is said that specie payments are suspended, we have really seen no special evidence of this fact, save in the single circumstance, that we find it difficult, or next to impossible, to get any fair equivalent for Western or Southern Bank Bills sent to us in payment for subscriptions. So much for what we have seen and felt, and our experience has, we doubt not, been similar to that of nine-tenths of our country-dwelling readers.

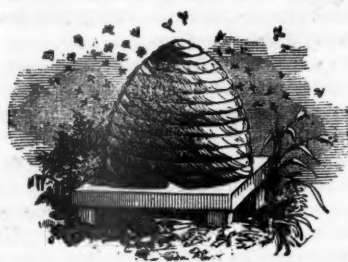
But it is not to be denied that there has been, and is, great trouble among certain classes of traders, manufactures, and dealers in railroad stocks, &c. It is also evident that the disturbance in the money market, and in the domestic and foreign exchanges of the country, have already told sorely upon the prices of farm products. The want of confidence between the East and West has almost entirely cut off the usual supplies of money necessary for buying grain. The inability of farmers to sell their produce has prevented them from paying their "store debts;" the merchants buying on credit have been unable to meet their debts to the city jobbers; the jobbers have failed to pay the importers; and the importers cannot pay their debts to foreign or home manufacturers; and thus a whole chain of dealers have been in trouble, and it is not strange that suspensions and failures by the hundred have occurred and are occurring in certain branches of business. The dealers on credit have been unable to pay their debts to the banks, and these in turn have been weakened, and to save themselves they have suspended specie payment, in name at least.

Without speculating upon the causes of this state of things, let us inquire what is to be the result? The first effect, and the one which will be most felt by our readers especially, is the depression in prices of farm produce. To those who have run in debt on the expectation of paying with crops to be sold at former rates, this will be a pinching time. And we see no help for it. Money has taken a higher relative value. With a partial destruction of credit, the real currency, the gold and silver, have a larger work to do in the exchanges, or trade of the country, and their value is enhanced. There is less money to buy the grain crops, and more grain must be given than formerly for the same weight of gold—a dollar weight for example. We say, those who have contracted debts will suffer, because they must needs give more of their crops to pay a debt of fifty or a hundred dollars—the legal debt being always founded upon a metallic currency.

Those who are not in debt will not suffer loss in the lower prices prevailing, for from the higher value of money, it will buy a greater quantity of those articles which they desire or need to purchase. When wheat was twelve shillings a bushel, sugar was twelve cents a pound. But when wheat sells for eight shillings, sugar will sink to the neighborhood of eight cents per pound, and so of cloth and other articles of merchandise. It is true, that this change in the relative value—this equalization of prices—will not take place suddenly all over the country. The disturbance in the money market and in the exchanges between the East and West will fall first upon the heavy products of the soil. Traders who have bought their goods at high figures will not reduce prices at once to the proper level, but the change will surely come, and that speedily. The trader who buys his stock, with cash, in this city to-day, can do so at prices far below what he could do only a few weeks since. The depreciation will fall hard upon the importers and manufacturers, and many of them must fail—indeed, almost all of them who have not a surplus from former profits to fall back upon.

But there is no cause for general alarm or despondency. The panic makers would have us believe we are coming to sudden and irretrievable ruin. But, in truth, the country is now richer, in what constitutes real wealth, than it has ever been before. With all the failures and suspensions, nothing worth speaking about has really been lost. We have to-day more gold and silver in the country than one year ago—more products of the soil—more of all the elements of real wealth. We have parted with some imaginary wealth. A farm, a corner lot, a Western village property, considered worth five thousand dollars one year ago, may now sell for but half that sum, but its intrinsic value is just as great or greater now than then. The stock of a certain railroad may then have been held at \$100 per share, while now it may not bring a dime per share, but the real worth of the road to the country, as a means of bringing produce to market, in opening and developing the farm lands along its path, and in other ways, is just as great as if its stock sold at par. The individual stock holders who invested their money in it have suffered severe loss, but the country is richer for its being built. The vast net-work of railways which have been constructed at so much cost, and which have entailed so much loss on individuals, are great additions to the wealth of the country. Suppose we have paid seven hundred millions of dollars for building 15,000 miles of railways. We have the railways now as a source of wealth—they are so much substantial capital—just as useful and just as valuable as canals, ships, wagons, or teams, to carry grain to market, to carry back merchandise, and transport travelers. England expended seven hundred millions in the Crimean war, and has nothing left for the money.

An immense sum—more than the entire cost of all the railroads in the country—has been added to our national wealth by the favorable Autumn weather bestowed upon us. Who can estimate the aggregate advantage to the corn crop, of this propitious ripening season? Who can calculate the value of the unusual Fall feed, so luxuriant over ten thousand pasture fields? We repeat, then, that whatever may now be the relative value of money and produce and manufactures, whatever may have been lost by individuals, the whole country has been benefited, and is richer than ever before in all that constitutes real wealth. War, pestilence, hurricanes or earthquakes have not annihilated any of the products of our labor. Let us then cast away all gloomy forebodings and looking upon the bright side of the picture, take courage for the future.



WONDERS OF THE BEE-HIVE.

NUMBER V.

While we are studying the multitudinous contrivances that add to the pleasure of our rural homes, let us not forget that there is one which, while least expensive, will at the same time afford both entertainment and profit. In the Aquarium, we have a glass box into which are introduced the gold fish, the shell fishes of different kinds, together with sea-weeds and other products of the briny deep in great variety. Not less entertaining is our glass-box, constructed for an

OBSERVING BEE-HIVE.

Rarely do we look into one of these hives without finding some new thing to excite our admiration. It is very easy to construct such a hive, and when once made and peopled, it demands no great care for a whole season, while by day and by night all the work that is going on within may be kept in constant view. It is enough for our present purpose to say that our observing hive contains a single piece of comb about twelve inches long and eight inches broad, each side of which is protected by a plate of glass; and though the bees are exposed to the full light of day, and occasionally to artificial light in the evening, their operations have gone on without interruption from week to week through the summer months; so that we write not by guess work, as too many have done, but according to what our eyes have seen.

A family of bees, when properly constituted, consists of one *mother-bee*, several hundred *sons*, and thousands of *daughters*, beside some thousands of *baby* bees in every stage of development from the newly-laid egg to full maturity.

The most numerous class consists of what we call the *workers*. They are of the female sex, but are not perfectly developed, and are exempt from the responsibility of reproducing the race. They are occupied constantly, however, in the care of the young, and in providing for the wants of the whole community. They bring the honey from the fields for daily use and for the Winter's supply, they collect the pollen or bee-bread for the brood, and the *propolis*, which answers the same end as putty in closing up cracks. They also feed the brood, and keep them warm, and at the right time cover up the cradles with well-fitting blankets,—beside doing many other things which it is unnecessary to mention now. We need hardly introduce the portrait of a worker-bee to our readers, as it is well known to be the only one of the family that is in the habit of making calls. The mother-bee is too busy at home to venture out into the gardens in search of flowers, or penetrate into pantries, allured by sweet odors; and the sons, we are sorry to say, are a lazy set, that after eating a comfortable breakfast, sally out for a short time at mid-day, merely for a little flirtation with any one of the other sex who may be at liberty to receive their attentions.

The *mother-bee* is usually called the *queen*, from

long-received tradition that she is invested with authority as a sovereign. There is no evidence, however, of the exercise of anything like authority on her part. There are no laws and no penalties, and not even any domineering, nor any contest for superiority. Every thing goes on, so to speak, like clock-work, and the wonder is that every bee should enter so fully and exactly into the plans of the rest. The absence of the queen from a hive, however occasioned, makes an excitement as soon as it becomes known. She is the rallying point in times of alarm, and there are some indications of attachment to her person. Many years ago, a Mr. Wildman, in England, created great astonishment by the almost magical power which he had over swarms of bees; the secret of his control over their movements was, that when he had once secured possession of the queen, their instinct made them all alight where ever he placed her, clustering like a body guard around her person. If he held her in his hand, they immediately flocked together there, and if he



Queen.

put her on the branch of a tree, that became the attractive point. The shape of the mother-bee, as our engraving shows, is quite different from that of the worker. She is longer and larger, and more slender and wasp-like in form. Her wings are also shorter in proportion, and her movements on foot are more rapid. She is rarely seen in ordinary hives, but in the observing hive may be kept in constant view. Her chief employment is to lay eggs, and the process is very curious. As she traverses the comb, the bees disperse before her, and she thrusts her head momentarily into the cells, till she discovers one that answers the purpose. Passing over it, she puts her abdomen into it, and a moment after, turns part way round with a kind of convulsive movement, after which she withdraws her body, and proceeds to another cell; the whole operation, as we have noticed it, occupying about half a minute. As she leaves, a small white oblong egg, slightly curved, is seen at the bottom of the cell, fastened to the wax by one end. We have lately seen three, four, and even five eggs in the same cell, and for a time supposed this to be an occurrence not described by any writer on bees. We find it alluded to by Wighton in his "History and Management of Bees," who says, "sometimes there are two or three eggs in one cell. This is owing to the queen being very prolific." We are disposed, however, to give a different explanation of the fact. In the hive where this was observed, there was a great abundance of empty cells, some of which had been used for brood, but the population was somewhat reduced, and the queen seems instinctively to have kept within the limits which the bees were able to cover and protect. It was not found, however, that in any case more than one of these eggs was allowed to remain many days in the cell.

The mother-bee must be without a rival, and if she perishes, her family are not willing to receive another put in her place, at once. We introduced a strange queen into a glass box with a few workers that had been separated from the main hive. They at once showed fight and maimed her, by biting off one of her legs. At another time, we put a strange queen into an observing hive which had one of its own. Quick as a flash a crowd of bees gathered around the stranger, and formed a cluster as compact as possible, and as large as a butternut, entirely concealing her from our view, while the other queen, though only an inch or two distant, seemed to be entirely unconcerned and unaware of the excitement. After six hours, we opened the hive, and tearing the cluster apart

with no little difficulty, released the prisoner, who was still alive, though so nearly exhausted that she died soon after. In this affray the workers alone took part, though Huber had led us to expect a duel between the two queens. On his authority it is said "if a supernumerary queen be introduced into the hive, she is laid hold of by the bees, who continue to be spectators, and even promoters, of the combat, in which one or the other of the queens is destined to perish." Undoubtedly such combats do sometimes occur, at least between queens which have come to maturity in the same hive.

The *drone* also must have a place among our pictorial representations. A noisy fellow he is, but good natured and well disposed, of larger size than the other inhabitants of the hive, more unprofitable and unwelcome.



Drone.

He is a mere consumer, and not a producer, and as the summer passes away, the worker bees begin to feel that "his room is better than his company." The hints to this effect are pretty plain, and if not successful, are followed by the most extreme and disagreeable measures, such as nibbling off his wings, driving him out of the house, and turning the key on him at night. No mercy is shown, and it is said that often in large apiaries, the bees of every hive, as if with common consent, take the same day for the expulsion and slaughter of the drones. And so the mother and her daughters keep house together through the winter, living on the fruits of their own labor—and ignoring all the "rights" of those who have contributed nothing to the interests of the commonwealth. In this at least they mete out justice, and whether by authority of law or not, their action as a vigilance committee have considerable claim to be endorsed as reasonable and proper "under the circumstances."

A SIMPLE FLY AND ANT TRAP.

Mr. Jno. R. Smith, of Hackensack, N. J., has furnished us with a simple composition which he says is much used in England as a sort of trap to catch flies, ants, and other insects. The composition is spread upon paper, and sold by pedlars at a penny a sheet. Mr. Smith has used these sheets, made by himself, around the trunks of trees, plants, &c., the varnish side out, to prevent the ascent of insects. It is made thus: Melt resin in any vessel over the fire, and while soft add to it enough sweet oil, lard oil, or lamp oil, to make it, when cold, of the consistency of molasses. This, spread upon writing paper with a brush, will not dry in a long time, and is so sticky as to hold fast the legs of any insects attracted to it, or accidentally coming in contact. It may be placed about the house, the pantry, or elsewhere, and will soon attract and hold fast ants and other vermin. It also used on table legs, and the edges of shelves, to prevent the ascent of ants, &c. One of the highest recommendations of this preparation over the ordinary fly paper is, that it is not poisonous.

WATERING PERSPIRING HORSES.

A Subscriber in Warren, R. I., inquires our opinion in regard to "giving water to horses when they are sweaty." If horses are to be driven or worked at once after drinking, it will do no harm to give them water to a moderate extent when hot or sweating; but if they are to stand still for a half hour, more or less, and especially if exposed to cold air during this time, they should not be allowed to drink over two quarts of water till they get cold, which will not be in less than from one to two hours, ordinarily.



Worker.

THE BEST FORM OF HORSES.

THE HEAD.—"The head of a horse should be narrow, lean, and not too long; but the principal matter to be observed respecting it, is, that it be well united with the neck, so that the horse may be enabled to bring it into a good position, and the best position in which a horse can possibly hold his head, is such an one as is perfectly perpendicular from the brow to the ground, so that were a plummet to be suspended from that part, it would just raze or touch the nose. Every horse that has too large a head is apt to bear too hard on the bridle, which not only tires the rider's hand very much, but exposes both to several disagreeable accidents; and besides, a large headed horse can not appear to any advantage unless he has a very long and well-turned neck." Thus says the "Farrier's Dictionary," upon which the Editor of the American Veterinary Journal

REMARKS.—The above paragraph looks very well on paper, but is a strange compound of truth and error. "The head of a horse should be narrow, lean, and not too long." A narrow, lean, and short head, affixed to the body corporate of a powerful draught horse would appear as ridiculous as if any one were to carve a statue of Dan'l Webster, representing his vast bodily proportions, and adorning the upper works with a cranium resembling the form of a pear, narrow, lean, and "chunky," "not too long." Therefore, the writer should have qualified his theory, and informed us what kind of a horse the above described head would be likely to adorn. If it be intended for the body of an animal of the nervous temperament, with dense tissues, spare muscles and diminutive stature, the theory may be correct; but reverse the order as above, and every one will perceive that the head and body are not symmetrical, which is a matter of considerable importance in the selection and purchase of a horse.

The position of the head is next referred to. "The best position in which a horse can possibly hold his head is such an one as is perfectly perpendicular," &c.

The writer has here evidently fallen into a common error, which confounds a faulty position with a physiological one. A head describing the same perpendicular line as that of the fore extremities would look very funny; might set very well on the neck of a goose or pelican, or phoenix, but when the horse is concerned, that is another matter. The best position in which a horse can possibly carry his head is that which he naturally assumes, uninfluenced by check or other fetter, rein or martingal. The position indicated by the writer of the above paragraph as the "best," is acknowledged by all horsemen to be the most faulty, for horses when performing feats of speed are observed to extend the head in a horizontal line with that of the spinal column. A free extension of the head, corresponding to the horizontal position of the neck and body, enables the horse to breathe with freedom, whereas if the head be attached to the body after the perpendicular fashion, it is apt to obstruct free respiration by pressure on the larynx or first respiratory passage. We are well aware that some horsemen consider this faulty position to be the best, hence they endeavor by means of the check-rein, and other appliances to make all their horses carry their heads perpendicular, but these men must have observed how relieved a horse appears to be when his head is liberated from this uncomfortable position, which, under the circumstances, can not be the best. If a horse with a large head bears too hard on the bridle and tires the rider's hand, then the rider or owner is at fault; such a horse should never have been selected for the saddle, for to

ride with safety we require a high head and neck. A horse having these points would not be likely to tire the bridle hand.

The writer of the preceding quoted paragraph concludes thus, "A large-headed horse can not appear to any advantage unless he has a very long and well-turned neck." This is more a matter of taste than of utility. Persons who purchase horses merely for their beauty are apt to make a sorry bargain. Others who select and pay less attention to the beautiful points, and more to enduring and physical qualities, are not so apt to get deceived. Many of the Pennsylvania horses used here in the trucking business have large heads and short necks, yet we hear no complaint in consequence.

Then again, a large head and very long and well-turned neck will not appear to any advantage unless affixed to a corresponding size and conformation of body and limbs. However, a horse may make up in utility, for all he lacks of beauty.

VALUE OF TAN-BARK ASHES.

Though tan-bark is much used for mulching plants, banking up houses, making paths, &c., considerable quantities of it are burned in many tanneries, where the spent bark is dried and used for fuel under the steam boilers. It has been an interesting question, with us, whether these ashes were valuable for agricultural purposes, or even for soap-making, as we suspected the soaking in the tanning process might remove the potash which is the most valuable as well as the most soluble ingredient in all ashes. During the past Summer, Mr. O. J. Hayes, of Essex Co., N. J., submitted to us for examination some samples of these ashes, and as no analysis of this substance had hitherto been made, we believe, we at once forwarded them to Prof. Johnson, of Yale College, requesting an analysis, which he has made, and the result is given in his letter below. By reference to the table, it will be seen that the ashes show less than three per cent (2.6) of potash and soda, while ordinary unleached oak and beech ashes contain more than three times this amount. The lime is not up to the average. In tables of analysis of unleached beech and oak ashes before us, the lime varies from 63 to 75 per cent. According to this analysis then, we may conclude, that while tan-bark ashes contain sufficient alkalies, (potash, soda and lime), to make them worth preserving and applying to such lands as require alkaline fertilizers, they rank considerably below ordinary wood ashes.—**ED.**

To the Editor of the American Agriculturist.

The samples of the ash of spent tan-bark you had the kindness to send me, were duly received. I understand that both were of the same quality, except that one was fresh—just burned—while the other had been exposed during the last Winter, to the weather.

I have made a complete analysis of the fresh sample, with the following results:

Potash and Soda.....	2.60	Phosphoric acid.....	trace
Lime.....	51.32	Sulphuric acid.....	5.68
Magnesia.....	1.90	Chlorine.....	trace
Oxyd of iron and alumi- na.....	2.47	Silica (soluble).....	4.63
Oxyd of manganese.....	1.05	Carbonic acid.....	26.46
		Coal, sand, and loss ..	5.92
			100.00

The composition of these ashes is such as warrants making trial of their fertilizing effects. The large quantity of lime they contain, as quick-lime and carbonate of lime, would alone render them of great value on many soils. They also contain 7 to 8 per cent of gypsum, which is often so eminently serviceable. The quantity of potash and soda is much more considerable than was to have been anticipated. Phosphoric acid has been nearly or quite removed from the tan-bark by washing.

The bark of trees, however, usually contains but very little of this ingredient.

Like every other fertilizer, the value of this must be ascertained by actual trial. The same results may be expected from it as from ordinary leached ashes.

Whether the soaking of the tan-bark so long in water separates any portion of alkalies or phosphates, does not appear from this analysis, as there exists, to my knowledge, no statement of the composition either of oak or hemlock bark with which to make a comparison.

SAMUEL W. JOHNSON.

YALE ANALYTICAL LABORATORY,
New-Haven, Oct. 1857.

A QUESTION ABOUT MUCK.

Nathan D. Coffin, of Hancock Co., Ind., says he has plenty of straw, as well as muck on his farm, and inquires if it would not be better to use the straw as an absorbent for manure, and haul the muck directly to the field instead of taking it to the yard and then out, thus making double cartage.

If straw be very abundant for the yard, and the soil be a warm one, not greatly needing the immediate benefit of manure, the proposed plan would answer. But muck and all peaty substances are usually in a kind of pitchy or asphaltic condition, so that they resist the action of the air, and do not decay and yield up their elements readily, without being first subjected to the action of alkalies, (lime or ashes), or to the heating of the compost heap. Putting them into the yard where they will be mixed with the animal manures serve a double purpose; first, the heating of the manure decomposes the muck, swamp mud, leaves, &c., and fits them for plant food; while second, these substances act as absorbents to retain the gasses and escaping elements of the more readily decaying animal manures. They are similar to straw in their composition and ultimate effects upon growing plants.

When muck or peat is entirely unneeded in the yard, owing to a superabundance of straw, the former may be dug out and piled up with a bushel of slaked lime to half a cord or more, thoroughly mixing it in. Left in this way a few weeks or months, it will become fitted for direct application and benefit to cultivated fields. In cold, wet or clay land, muck will often lie for years undecomposed. In warm, light soils it is more rapidly reduced, and therefore sooner available to plants, though not immediately so, except in the most favorable conditions of warmth, air and moisture. Every thing considered, it is generally better to cart it first to the yards and compost it with manure.

BONES IN THE MANURE HEAP.

Mr. G. C. Lyman, of Susquehanna County, Penn., referring to the article on page 227, upon dissolving bones, suggests that in the absence of sulphuric acid, which is often difficult to obtain, bones might be put into ashes to be dissolved, if sufficient muck be placed over the heap to absorb all escaping organic materials. We cannot speak from experience on this point, and we are not quite certain how far the bones would be crumbled or dissolved in the ashes when shut out from air. If the bones can be reduced by surrounding them with unleached ashes, and then covered over the whole with a coat of muck, say three feet or more in thickness, the plan would appear to be a good one. A little plaster mixed with the muck would be an improvement. Before using the materials, the dissolved bones—if they be dissolved—should be thoroughly mixed

with the muck. We shall be pleased to have Mr. Lyman and others try the experiment and report the result.

ICE HOUSES.

Simply as a matter of economy an ice-house may well have a place on a majority of large farms, and two or three proprietors of smaller farms can readily unite in the construction and filling of one for common use. When butter and cheese are manufactured even on a limited scale, the advantages of ice in Summer are evident. Various articles of food and meats, bread, milk, butter, &c., are kept fresh so much longer in an ice-box or chest, that there is considerable saving of fuel required in hot weather for frequent cooking. Every one can estimate for himself the saving, and also the advantages of the cheap luxury in hot weather of cool drinks, fresh food, &c.

A CHEAP ICE ROOM.

An ice house is, after all, a cheap and easily built structure. The filling is done at a season when the cost of labor is but very trifling, and need scarcely be taken into account. We have heard of effective ice rooms constructed at an expense not exceeding *five dollars*. A correspondent of the "Country Gentleman" describes one which scarcely cost this sum. In the north-east corner of a shed he partitioned off a room eight feet square in the clear, using for the partition the cheapest rough boards. A row of joists was set up on the north and east sides, and boarded up to leave a vacant space of ten to twelve inches. On the other two sides two rows of joists were set up and boards nailed on, leaving a similar space between them. The space was filled with spent tan-bark. A loose floor was laid down and covered with a layer of loose straw. Pure, clear, hard ice was cut up with a saw into easily managed pieces, and packed closely in the room, leaving six inches between the ice and sides, which space was filled with saw-dust. Over the ice saw-dust was spread to the depth of a foot. It might be well to fill up to the roof with straw. He states that the whole cost of construction and filling did not exceed *seven dollars*. The family had used ice all Summer as freely as if there had been an unlimited supply, and there is evidently enough in store to last until the "new crop comes in."

AN ICE-HOUSE OF MODERATE EXPENSE.

We present, herewith, engravings of a convenient, ornamental, and comparatively cheap ice-house, which we find in "Allen's Rural Architecture."* We copy, by the publisher's permission, from this work, a portion of the author's description:

"The size may be twelve feet square, and from that up to any required extent. Less than twelve feet square would be too small for keeping ice well. The idea here given is simply the *principle* of construction. The posts should be full eight feet high above the ground to where the plate of the roof is attached. Mark out your ground the size you require for the house; then, commencing at one corner, dig a double set of holes opposite each other, one foot deep, and two-and-a-half feet apart, on each side of the intended building, say three feet equidistant, so that when the posts stand up they will present a double row, one-and-a-half feet apart. Then set in your posts, which should be of oak, chestnut, or some lasting wood, and pack the earth firmly around them. If the posts are sawed, they may be 4 by 6 inches in size, set edge-ways toward each other. If not sawed, they may

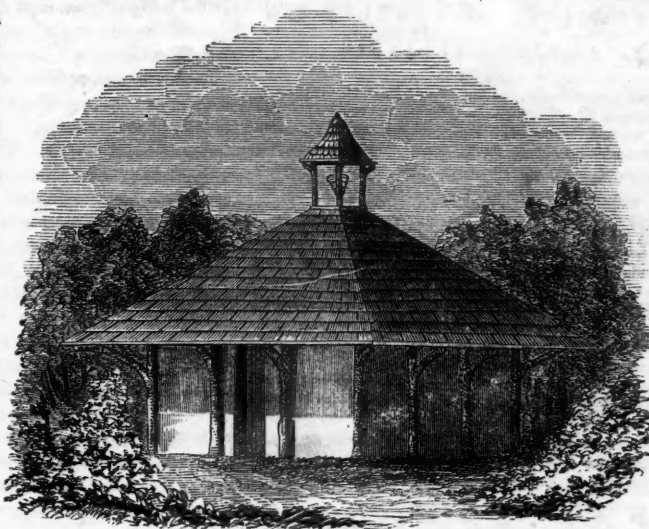
* This book, which we have frequently referred to, is, in our opinion, one of the best sources of information regarding the economical structure of rural buildings of all kinds, from the stately farm mansion down to the simplest hen-house, or pigsty. Published by A. O. Moore, of this City. Price \$1 25, at which price single copies can be procured and forwarded, post-paid, to any of our subscribers desiring it.

be round sticks cut from the woods, or split from the body of a tree, quartered—but sizable, so as to appear decent—and the insides facing each other as they stand up, lined to a surface to receive the planking. Of course, when the posts are set in the ground, they are to show a square form, or skeleton of what the building is to be when completed. When this is done, square off the top of each post to a level, all round; then frame, or spike on to each line of posts a plate, say six inches wide, and four to six inches deep, and stay the two plates together strongly, so as to form a double frame. Now, plank, or board up closely the *inside* of each line of posts, that the space between them shall be a fair surface. Cut out, or leave out a space for a door in the center of the side where you want it, two-and-a-half or three feet wide, and six-and-a-half feet high, and board up the inner partition sides of this opening, so as to form a door-casing on each side, that the space between the two lines of posts may be a continuous box all around. Then fill up this space between the posts with moist tan-bark, or saw-dust, well packed from the ground up to the plates; and the body of the house is inclosed, sun-proof, and air-proof, to guard the ice.

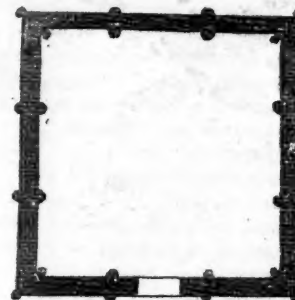
Now lay down, inside the building, some sticks—not much matter what, so that they be level—and on them lay loose planks or boards, for a floor. Cover this floor with a coating of straw, a foot thick, and it is ready to receive the ice.

For the roof, take common 3 by 4 joists, for rafters; or, in place of them, poles from the woods, long enough, in a pitch of full 35° from a horizontal line, to carry the roof at least four feet over the outside of the plates, and secure the rafters well, by pins or spikes, to them. Then board over and shingle it, leaving a small aperture at the top, through which run a small pipe, say eight inches in diameter—a stove-crock will do—for a ventilator. Then set in four little posts, say two feet high, as in the design, throw a little four-sided, pointed cap on to the top of these posts, and the roof is done. If you want to ornament the under side of the roof, in a rude way—and we would advise it—take some pieces of 3 by 4 scantling, such as were used for the roof, if the posts are of sawed stuff—if not, rough limbs of trees from the woods, to match the rough posts of the same kind, and fasten them to the posts and the under side of the roof, by way of brackets, or braces, as shown in the design.

When the ice is put into the house, a close floor of boards should be laid on joists, which rest on the plates loosely, so that this floor can be removed when putting in ice, and this covered five or six inches deep with tan, or saw-dust—straw will do, if the other cannot be had—and the inside arrangement is complete. Two doors should be attached to the opening, where the ice is put in and taken out; one on the inner side of the lining, and the other on the outer side, both opening out. Tan, saw-dust, or straw should also be placed on the top of the ice, when put in, so as to keep the air from it as much as possible; and as the ice is removed, it will settle down upon, and still preserve it. Care must be taken to have a drain under the floor of



ICE-HOUSE.



GROUND PLAN.

the house, to pass off the water which melts from the ice, as it would, if standing there, injure its keeping.

We have given considerable thought to this subject, and can devise no shape to the building more appropriate than this, nor one cheaper in construction.

WASPS.

In some parts of the Country two or three varieties of wasps are so numerous as to be a nuisance at least. A correspondent of an English paper, "The Field," recommends the use of spirits of turpentine, which he says will destroy the wasps without setting it on fire when poured into their nests or holes, though he recommends firing when there is no danger of burning objects near by. This can be applied in the day time, since the absent wasps when returning will dash into the flames and perish.

A Good Trap for wasps says the same writer, is a sugar-hogshead, with a few pounds of sugar left in it; place in it a milk-dish half full of water; put a lighted candle, one with a large coarse wick, in the middle of it; have a lid that you can clap on at any time to shut out the daylight; all, or nearly all, the wasps in the neighborhood will frequent this trap if you only give them a day or two to find it out. When you have some thousands in clap on the lid, and the wasps will naturally fly at the candle, and, singing their wings, fall into the water. I have killed a pailful in a day by this method. The greatest difficulty I found was to get a candle that could not be put out by the wasps flying into it. It will be necessary to get something which could not be put out by them. Of course it will not be necessary to light it till just before putting on the lid.

A PICTURE OF FARMING IN CENTRAL ILLINOIS

[We present below the first of a series of letters from an intelligent farmer, or 'Farmer Physician,' recently settled in Christian County, which lies but a little south of the geographical center of the Prairie State. During the past season we journeyed very nearly 2,500 miles in different parts of Illinois, and we came to the conclusion, that taking into account the very small proportion of waste land, the native richness of the soil, its ease of opening, the position of the State as respects markets, &c., Illinois is to be the empire Agricultural State. She has a strong rival "over the river" in Iowa, but has, to say the least, the advantage of being nearer to the Eastern seaboard—the great outlet for surplus agricultural products. Missouri will ultimately come up to lively competition with both Iowa and Illinois, but Illinois is bound to take the lead. While the sphere of the *Agriculturist* is essentially American, embracing the agriculture of our whole country, we shall deem it advantageous to all our readers, East as well as West, to devote special chapters to the agricultural features of those interesting regions known as the prairie lands.—Ed.]

To the Editor of *American Agriculturist*.

As doubtless some of your numerous subscribers and readers may like to know the manner in which a prairie farm is opened and cultivated, I propose to give them herein an inkling of the same. The vast prairie region of Illinois was, before the era of railroads, as little cultivated and almost as sparsely tenanted as a desert, though not as unproductive. The building of the Illinois Central Railroad and its branch, and of the various other railroads now traversing the State in every direction, brought into market all the previously untilled or "wild" prairie lands—hitherto uncultivated, except near to large towns or rivers, because of the difficulty of getting the crops to market. Now settlers boldly locate themselves in the middle of large prairies, because they have, at almost any point chosen, convenient access to railroads whereon to ship their produce.

Much diversity exists in the soil, situation and condition of the prairies—some being more productive than others, some wetter, some flat, and some rolling. The soil is generally a black, vegetable loam, rich in humus, sometimes lacking in some of the conditions necessary for particular crops, but usually sufficiently strong to produce successive grain crops for several years without much manifest deterioration.

The depth of the surface soil varies from six inches to three feet, underlaid by various subsoils—here, in Christian County, by yellowish brown clay, yellow clay, with sandy and rocky strata as you descend. During the month of April the grass begins to shoot, and in early Springs the "merrie month of May" displays a beautiful carpet of green, richly interspersed with flowers of every hue. As the season advances and the verdure increases, the flowers change, the early ones being superseded by others, taller than the first born, to correspond with the growth of grass, and the present month, (September), witnesses flowers taller than a man on horseback, and rich in color. Soon will come the wane when flowers and grass will brown and yield their life to the unmerciful hand of Jack Frost.

From April, if an early Spring, to the middle of July, is the season considered best for breaking up the native sod, because the growing grass soonest dies when turned under at this time. If plowed before this, the grass, unless plowed very deep, grows upwards through the inverted sod; if plowed later than this season it does not properly rot, and will be hard to cultivate the ensuing year. This is Sucker philosophy, partly right, and, I think, partly wrong. My own views I will give at a future period. The shallower the sod is turned the sooner does it rot. This sod is a

matted mass of grass and flower roots, with occasional patches of red root—a tough customer—and willow roots, the plowman's hate.

Freshly broken prairie is usually planted with corn, either dropped in every third furrow as plowed, or afterward by a hand-planter, an ax, or a pointed stick. It is also broken to lay until Fall seeding with wheat, by which time it is usually tolerably well rotted.

This prairie breaking is something of a job, and requires a good steel plow. Formerly, it was not deemed possible to break prairie with horses and small plows, but large plows and from four to eight yoke of oxen were thought requisite. It has since been found that 12-inch plows of peculiar construction, and two or three good horses, can do the same work as a 24-inch plow and five yoke of oxen. Breaking-plows for cattle, and sometimes the smaller ones for horses, are rigged with a long beam, an axle and two wheels, one to run in the furrow, of somewhat larger diameter than the other, which runs on the land. The beam works between two uprights, set in the axle, and is raised or lowered by a lever, one end of which is fastened to the beam near the clevis, the other rests on a support near the plow handles. I believe two or three good horses with a properly constructed plow will do more work than the ox teams, and better.

When the inverted sod is planted in corn, nothing more is done to the crop until it is harvested. If intended for wheat, the grain is sown on it in September, and harrowed in—very few harrowing the ground before sowing. I belong to the progressive school of agriculture, and have deviated from the old foggy, sucker mode of sowing wheat. My ground was well broken, and turned perfectly flat, each furrow slice fitting down next its neighbor like floor planks. I made myself a heavy double harrow, four bars in each half, and twenty teeth in each half, or forty teeth in the whole harrow. It was run twice the same way the land was broken. "Why, doctor! what are you going to the trouble of harrowing your land before seeding for?" ask the old Suckers. "I am going to drill in my wheat, gentlemen." "Oh! nonsense, it is impossible." After the harrowing I drilled in one bushel of wheat to the acre, a rain immediately after brought it up at once, and, September 1st, shone on as beautiful a field of green as I ever saw. "Well I declare!" says old Sucker, "who ever saw such a crop on sod; why, doctor, it is good for forty bushels an acre if for one; but you sowed too much seed." "Not so, old friend, only one bushel to the acre, but every grain grows, and all is put at a uniform depth. It is not from half an inch to six deep in the ground, or lying uncovered on top, but every grain well covered about an inch-and-a-half deep."

So much for this deviation from old foggy farming here. My next innovation will be, plowing in October for Spring wheat and corn.

Houses on the prairies are generally built of wood, and cost from two hundred up to a thousand dollars; for the latter sum an excellent house can be built. Water is found at from ten to thirty feet, very good, usually hard. Fencing is of various kinds, as may suit the owner's fancy or location, hedge and ditch, post and board, wire, or worm fence of rails.

Lumber costs at the mills from \$17 to \$20 per thousand feet. Posts, split, seven cents a piece. Oxen are worth \$75, and superior yokes \$125. Horses from \$100 to \$150 each. The second year a prairie farm can be plowed with two horses very easily, the sod having well rotted, and the soil being loose and light. Corn is planted in various ways, to suit the owner's fancy, some in drills, some in hills, generally too thick in

the hill. Few, if any of the farmers thin out their corn after planting—they say for want of time. Corn yields from forty to eighty bushels per acre. It is gathered in the Fall, Winter, and sometimes not till the ensuing Spring, and put into rail pens to be shucked, (husked), and sold or fed to hogs as the case may be. Wheat is sown at the rate of a bushel and a half per acre, carelessly put in by most farmers here, and about as much cheat sown as wheat. The yield is from fifteen to forty bushels an acre. Most of the farmers hereabouts, within a range of fifty miles, with whose opinions I have become acquainted, believe that wheat will turn to chess. They cite numerous examples, and certain modes of testing, to prove their conclusions just. One of these experiments is to lay a board on the growing wheat when several inches high, and after it has lain sufficiently long for the wheat to turn yellow underneath, remove the latter, and let the wheat grow, marking the spot where the board was placed. The spot in harvest will be found all cheat and no wheat. The wheat must be perfectly clean before sowing, and the spot chosen free from cheat. This is asserted to be a certain recipe for the transmutation of wheat to cheat.

It may be mentioned in connection with this current opinion here, that I have not yet found a farmer who takes an agricultural paper.

Wheat is generally cut by machines, stacked, and thrashed in the field, the grain sold at the nearest market, and the straw burned. Oats do not do well until a few years after the land has been in cultivation, as they grow too much to straw. Barley does well, but hitherto has not been much cultivated. Potatoes are a good crop.

Trees grow well in the prairie, and settlers plant out different varieties around their dwellings, mostly fruit trees, which do not do well on the bleak prairies. Small fruits flourish very well, but should have some sand about their roots or stems, as they otherwise make more leaves than fruit. Vegetables of all kinds are prolific here, the melon tribe wonderfully so.

Plowing by contract costs \$2 50 to \$3 per acre, and many thousand acres are thus broken up.

Any man who wants to commence farming on the prairies must be possessed of means and energy, and not expect to make a fortune too easy. A section of land requires about \$5,000 cash to commence profitably, while it will require all of the half of that sum to farm a quarter section as it should be done. I include cost of land, house, fencing, animals, implements, &c. I need not make the estimates, each one can figure for himself.

But little grass is as yet raised for hay. The ease with which the land is cultivated tends to make slovenly farmers. There is a want of care and neatness perceptible on most prairie farms. There is also a want of education among the children of farmers here. The little they do receive is but superficial, and they lack all necessary tuition having any bearing upon their occupation.

County Agricultural Societies exist, and these may, properly managed, do much good, but there is a great need of agricultural newspapers, the monitors and assistants to all good farmers.

There is plenty of fine land here yet open to settlers, at various prices—and improved farms also to be purchased. A new class of farmers are coming in, and things will begin to change I hope for the better. I shall endeavor to set an example for old fogysm to profit by. I hope to stir up the "natives" to the value of agricultural periodicals, and try to make them "take the papers."

H. H.

PRAIRIE COTTAGE, near TACUSA,
Christian Co., Ill., Sept. 18, 1857.

AN ILLINOIS FARMER'S
EXPERIENCE.

King Philip Corn, Dent Corn, Sugar Cane, Poland Oats, Onions, Beans, Cabbages, Pumpkins, &c., or what has been grown on twelve acres of prairie land.

In a letter dated September 21st, from Mr. L. Martin, of Leland, LaSalle County, seventy or eighty miles south-west of Chicago, we find some of the details of his experience in farming in a small way. A few extracts from his letter may be suggestive, and help make up a picture of the Western agriculturist's daily operations. They will also show what can be done even on a few acres. We could point to not a few men in New-York, and elsewhere, not long since reputed to be worth tens of thousands, who would to-day, be rich did they own the twelve acres described below, with what has grown upon them the past season.—Ed.

"...I received the package of King Philip corn you sent me, and liking its appearance, purchased a peck more of the seed which I chanced to find in Albany. I got it home only in time to plant on the third day of June. In eight weeks from planting we had corn fit to boil and we used freely all we wished for roasting and boiling. I have now harvested from the peck of seed, on $\frac{1}{2}$ acre, sixty bushels of sorted seed ears, and twenty bushels of smaller ears for other uses. I cut and shocked it on the 24th of August, *only eighty-two days after planting*. Last week I had two bushels ground fine, and I pronounce it the sweetest and best corn I have ever used. It will, I think, be the best seed corn we have raised in the West. If the ground is broken before the last of June we can get a good sound crop... It does not have to grow so large a stalk as to hinder the early maturity of a good large ear. A neighbor seeing it in the field, remarked that the stalks were too small, to which my boy, a lad of nine years, replied that, 'it was not the stalks we were after, but the ears.'... My Sugar Cane was up only two inches, when that heavy June rain covered it over with water for a week or more, but it came out bright and is now 13 to 14 feet in height... My Poland Oats, the hens nearly harvested for me, but I have saved a quart of seed from my Agriculturist letter package.

"...I have but a small farm, but have secured some good crops. On 12 acres, broken up last year, I have this year raised: 4 acres of Dent corn; $\frac{1}{2}$ acre of King Philip corn; 2 acres of carrots and onions, *in alternate rows*; $\frac{1}{2}$ acre of onions sown broad-cast; 1 acre of beans, from which I harvested 21 bushels; 2 acres of large Bergen cabbages, on which there are now between 10,000 and 11,000 large heads very fine; and 1 acre of potatoes. On the remaining acre I have peas, melons, cucumbers, &c., while over the whole ground is scattered here and there, somewhat promiscuously, pumpkins, squashes, turnips, &c., so that not a foot of the 12 acres lies idle... The $\frac{1}{2}$ acre of broad-cast onions yielded a large crop but it required a good deal of work to keep them clean when thus sown... You will of course know that myself and 9-year-old boy have been busy with our team to keep the weeds in due subjection, and especially so as I had my leg broken in January, in blasting logs for fence posts. Indeed, owing to this accident we could not even fence the plot until after the crops were up, and I had to hire a man to do the first plowing..."

The soul needs a certain amount of intellectual enjoyment, to give it strength adequate for the daily struggle in which it is involved.

ANOTHER
CORN HUSKER.

On page 198, (Sept. No.) we presented an illustration of a Corn Husker, terming it "the latest and probably the best invention for the purpose." In this it appears we were at least partly in error, as we have since been presented with an engraving of another machine, patented this present year, by Dr. E. S. Holmes, of Lockport, Niagara Co., N.Y., and called 'Holmes' Automatic Corn Husker.' We cannot, as yet, speak from personal observation as to its working "faculty," but as in the former case,

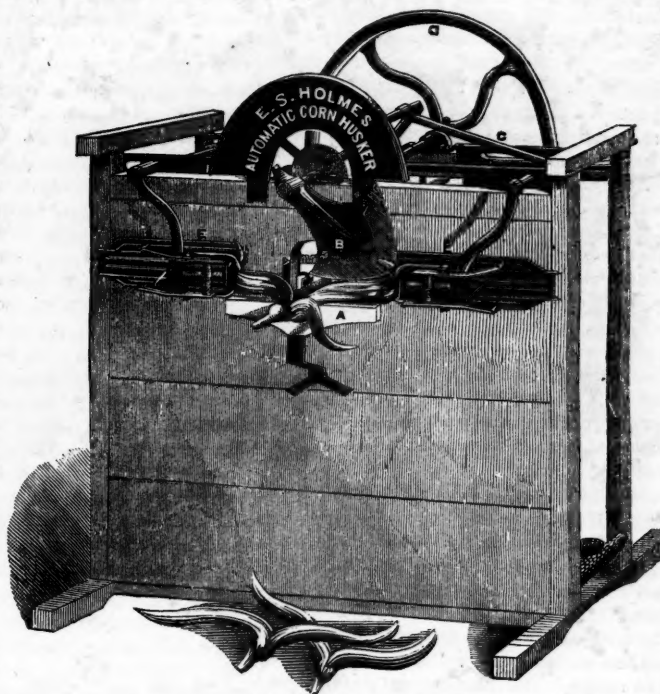
we introduce an illustration and brief description to keep our readers posted in regard to what is being done to mitigate the tedious labor of husking corn. The machine, as here shown in operation, has a pair of iron hands with fingers, which by turning the crank are made to approach each other, and close so as to clasp the husks and tear them apart. The ear is at the same time caught by clamps, drawn in, and the butt cut off by the knife B. The husked ear is then dropped on the other side of the machine. It is claimed that the corn can be husked from the "shock," and also that the machine may be placed in the side of a wagon-box, and driven through a field of tall standing corn, with a boy driving the team and turning the crank, and a man to bend down the stalks and present them to the fingers, when they will be husked, clipped from the stalk and dropped in the wagon—that is to say, it husks, picks and loads the corn at one operation. For particular and definite information we must refer those interested to the patentee as above.

THE MARKET GARDENERS AND
FARMERS OF LONG ISLAND.

Going to Market—The Wagons—Raising Potatoes—Seventy-five dollars worth of manure to the acre—Mode of culture, &c., described—Potato Rot.

To the Editor of the American Agriculturist.

As you and I chanced to see one of those long lines of market wagons that daily and nightly pass over the road to New-York City, you requested me to note down for your readers some account of their operations, and I will comply with the request. First, of the marketing. If we go over to the west side of the city, to Washington Market, about 9 o'clock in the evening, we shall find most of these wagons there, with the horses unhitched, quietly eating, and their owners are whiling away their time, as best they can, in an occasional nap, perhaps. Most of them have come thus early, in part to secure a good position, while others are arriving at all times of the night. Soon after two o'clock in the morning business commences, and they generally have their loads sold out and are ready to start for home by daylight, before the citizens are stirring, or the streets filled



with bustling vehicles. Arriving at home for breakfast the market men resign their teams to the "hands," and having finished their repast they sleep till 2 o'clock, while another load is preparing and are ready to start again by 3 o'clock, P. M.; the time of starting of course depends upon the distance from the city. Such is the life of the mass of those who supply the almost incredible amount of produce brought to the New-York Markets in wagons. This is particularly the case with market gardeners, and those growing potatoes on a large scale for the months of August and September. The market wagons, by the way, are made strong and hung on springs. They carry forty baskets or more at a load, and cost \$150 to \$200 each. We find that potatoes, vegetables and fruit carried to market in nice covered spring wagons, free from dust and bruises, sell quicker, and enough higher to pay for the extra trouble and expense. At daylight or before, the wholesale dealers, or middle men, of the market are all astir, disposing of their potatoes, turnips, cabbages, onions, parsneps, squashes, celery, poultry, &c., &c., to the thousands of hucksters, provision dealers, and corner grocery men scattered through the city, who in turn are early ready to retail to their customers for breakfast or dinner.

Early potatoes are succeeded by wheat, and where ten acres or more are planted, it is necessary to hurry up the digging and marketing, to get the ground ready in season for sowing, as few early potatoes are stored in the cellar. Nearly all the potatoes grown here are the Mercers, for though many new varieties have been introduced, these as yet hold the supremacy. The Carters, though a fine variety in the place where they originated, do not maintain their good reputation with us. For very early marketing the Junes are in high estimation, while the Peach Blows promise well for those who can allow them time to mature.

As soon as the corn crop is secured, the teams, with less sightly wagons, are set to drawing manure from the various landings, for the succeeding Spring planting. This is brought from the city in boats, sloops, and by railroad. No matter how cold the weather or high the wind, if the roads are at all passable the teams are upon them. Those

and are perhaps not so well suited to other portions of the country. I have full faith in the plant, for hedging purposes; and think others will have, too, when they become fully acquainted with it. I am glad to see that many are waking up and finding out its true value. Many are trying it, and succeeding finely. Good hedges may be seen in Logan, Morgan, Menard, McLean, and other counties of this State. Out of seven hedges I saw, (in two counties,) that were much exposed, only one was injured by the Winter; and that gave signs of having been badly treated.

JNO. A. KNOX

WALKER'S GROVE, Mason County, Ill.

REMARKS.—We thank Mr. Knox, for his defence of the plant, and especially for his particular directions regarding cultivation. It should be borne in mind, however, that Mason County, Ill., is in about the latitude of 40°, which is the parallel of Philadelphia. A large portion of the prairie country of Illinois and Iowa, where hedges are most needed, are north of that latitude. We think, moreover, that the experience of others, no further north than 40°, proved that the Osage Orange would not endure cold like that of the past two Winters. Let us have full returns on this point. In the hands of such skillful men as Mr. K. appears to be, the trouble of planting and annual cultivation is less than we have estimated it for the general mass of farmers.

FURTHER ON THE OSAGE ORANGE.

Since putting the above article in type, we have had sundry notes on the same topic, and we find most of the journals in Northern Illinois, Iowa and Wisconsin, are pretty unanimous in a want of faith in the *hardiness* of the Osage Orange. The "Spirit of the Agricultural Press," published in Champaign County, Eastern Illinois, 40° north latitude, says:

"About four years ago the Illinois Central Railroad Company contracted with an Ohio firm, for building a hedge, on each side of its line, from Chicago south, 75 miles nearly, making in all 150 miles of hedge, which was to fence the line. In the course of two or three years the Hedge Company set from 30 to 50 miles, and then abandoned the job, and the hedge remains as they left it—a shabby piece of business. We are of opinion that the Osage Orange hedge will not, for at least 10 years to come, prove a fence for Illinois prairies. Carefully cultivated, that is, hoed three or four times a year, cut down careful yearly, and fenced, and protected from prairie fires, the Osage Orange makes a fence, which for strength, beauty and durability, cannot be matched or exceeded. If left without cultivation, its failure to make a fence, or even a respectable growth, is certain. If properly cultivated we should have no fears of killing by frost south of 41°—north of that line its fate would be doubtful. A good fence with posts 8 feet apart, and 5 boards high, costs our farmers from \$1 to \$1 25 per rod. An Osage Orange Hedge will cost twice that sum before it will be fit to turn stock—not reckoning the cost of the fences you have to make to fence the fence."

THE OSAGE ORANGE IN LAW.

The Ottawa Free Trader, in La Salle County, (latitude 41° to 41½°) refers to trouble between the farmers thereabouts and the planters of Osage Orange hedges. A farmer in that county, on the south side of the Illinois River, contracted with one of the hedge companies to plant and take care of a hedge for five years, he to pay three-

tenths the first year, two-tenths the second year, and so on. The company planted the hedge a year ago last Spring, receiving the first payment. Last Winter the hedge was killed out, scarcely a plant surviving. The past Spring the company reset the hedge and demanded the second payment; but the farmer claimed that inasmuch as the hedge was totally killed last Winter, the resetting this year must count as the *first* setting, for which he had already paid. He non-suited the company, but it was on a technical point only, so that there was no decision on the merits of the question, which is to have a hearing in the Circuit Court. There are many farmers in Illinois in a similar condition to the one referred to above, and we shall look with considerable interest for the final decision. We have had some experience of the attempts of large companies to impose upon individual farmers, and know how to sympathize with the latter. We have a very vivid recollection of being "sued" for \$30 for a Fanning Mill, set down on the farm "for trial," against our wishes, and almost against even our permission. We also remember the chop-fallen look of the agent of the "Fanning Mill Company," as, at the end of the suit, he paid his own costs, took away the mill, and paid us *five dollars and fifty cents for its storage*.

TIMOTHY BUNKER, ESQ., ON A JOURNEY.

His views of Railroads—Farm Improvements—Sand Barrens—Swamps—Sorghum.

MR. EDITOR.—I do not know but you have thought that my letters to your paper have "gin out," seeing that I did not write anything the past two months. But the fact was, I have been off to see what was going on in the world, outside of my own farm. You see there are some people up here that think Hookertown is in the centre of the world exactly, and they haven't the least idea but what the whole world turns round on our axis. In fact they believe that the north pole runs straight through our meeting-house steeple, and what can't be learned in our parish, is not worth knowing. Ned Bottom, a man of seventy, was never ten miles from home, and never saw a steamboat nor a locomotive. It was only last night that he was bragging about it, as if it was something to be proud of. "He had never been caught in one of those man-traps. Not he!"

I suppose it is a fact, that a good many people get hurt on the railroads, but I guess not so many in proportion to the travel as are injured in the old-fashioned way of horse and carriage journeying. I cannot see what Providence has suffered such things to be invented for, unless he designs folks should use them to find out what the rest of the world is made of, and what other people are doing. Our minister preached a sermon a while ago about "Many shall run to and fro, and knowledge shall be increased," and he thought the day of the fulfillment of this prophecy had come. Now I suppose I don't hear any too much of sermons, and practice altogether too little. But I heard the whole of this, and thought I would fulfill my part of the prophecy, and started off in the cars, with my wife, the same week.

We first went up to Uncle Philip Scranton's, a brother of Sally's, who lives in Farmdale, over east of Hookertown. Connecticut, you know, is all cut up into railroads, and has more track to the square mile than any other State in the Union. It is wonderful to see the influence these railroads have had upon the farms, wherever I have traveled. Almost every farmer lives within

sound of the whistle, and has a ready market for all he can raise, at the depot or nearest village. Instead of going off to Providence or Boston, a week's journey, to sell his cheese, butter, and poultry, an hour's ride in the morning brings him to a market. He loses little time and gets a higher price. This stimulates production, and it is wonderful to see the rocky lands, and the swamps that have been brought under cultivation to meet the increased demand for farm crops.

Uncle Philip is a farmer of the old school, but keeps up with the times better than a good many young men. He used to take the old New-England Farmer forty years ago, and got a good many ideas from Fessenden and others, who sought to improve farming in those days. You can see where those ideas have been bearing fruit on his farm ever since. He reclaimed a swamp by ditching, bogging, and covering with gravel, thirty years ago, and it bears near three tons of hay to the acre now.

He has found that it pays to clear up rocky fields, so rocky that most lazy men get discouraged. He has worked up these rocks into heavy stone walls, with a handsome face, and well capped. He finds these cleared rocky lands just the spot for orchards, and some of the finest trees he has are upon these reclaimed pastures. It is astonishing to see what a sight of work a man can do in a life-time, and what a beautiful homestead he can make of rough barren acres.

He has a nice garden full of fine vegetables, which are now in their glory. Up in one corner there is a lot of bee-hives, full of music and honey, setting the owner a good example in the way of industry, and rewarding him for his care with a bountiful supply of well-filled comb. All around the wall he has fruit trees and grape vines, which are now loaded with fruit.

I found a lot of your Sugar Cane up here, and indeed I have seen it all through the State where I have traveled. One farmer, who had a large lot, was going to run it through his cider mill to crush the canes, and thought it would answer all the purpose of a sugar-mill. Uncle Philip was trying his for soiling, and found it to work first-rate. He sowed sweet corn along side of it, both in drills, and found that the cane gave the most fodder, and that the cows would eat it the quickest. He says there is almost no end to the amount of stock a man can Summer, if he will only sow corn or sorghum. He thinks he gets a quarter more milk from his cows for this daily fodder. He feeds only at noon, every day. He thinks this is the best time, because the cows have all the morning to eat grass, and then the new kind of food offered at noon induces them to eat more. The more food you can induce a cow to eat and digest, the more milk you will get, and the more profit you will find in keeping her. This is one of his maxims, and I guess he is right. His stock is a mixture of grade Devons and grade Durhams. He averages about three hundred pounds of cheese to the cow, every year.

Another of Uncle Philip's experiments is reclaiming a sand barren. He had about six acres of such poor sandy land that nothing would grow on it. It was not worth the taxes paid on it. He has put on muck and stable manure in such quantities, that it will now yield forty bushels of corn to the acre. I find he has a great idea of muck, as all the farmers have in this region.

In-doors, Uncle Philip's wife manages things quite as well as he does upon the farm. The butter and cheese are well made, and the house is well kept. I wish the Tribune man, that told such stories about country cooking, could have set at her table for a week, as we did. The coffee and tea were enough sight better than I

ever found in your city, and the bread, meat, and vegetables, were all that an epicure could desire.

I had no idea, when I stopped writing, that so many of your city folks was a going to follow my example, and *suspend*. I shall have to be more careful of my conduct.

Yours to command,

TIMOTHY BUNKER, Esq.

Hookertown, Conn., October 15th, 1857.



Fig. 1.

THE AQUARIUM.

"A NEW PLEASURE."

Though the chief aim of this journal is, to collect and disseminate information referring directly to the practical labors of the field, the garden, and the in-door operations of the rural home, yet, as we have now more room, a small portion of our pages may be appropriately devoted to those branches of the fine arts in which every lover of nature has a direct or indirect interest. In our last number, at page 229, we introduced descriptions and illustrations of several ornamental structures for the garden and lawn or yard, and we have more of them in course of preparation. We now have the pleasure of presenting to our readers some information on a topic of intense interest, which will be new to most, if not all, since, from its recent development, but little is known on the subject in this country, or even abroad, though a very lively interest is just now awakened in England, where the first discoveries have been made within six or eight years.

The cut, above, represents a simple glass box standing upon a common table, in which are a variety of plants, fishes, and small animals. What is of most interest, is the fact that these plants and animals are so situated that they will live and flourish for years, in the same limited cage, if such we may call it, and that, too, without any change of the water in which they dwell. And this remarkable condition is brought about by the simple application of one of those beautiful laws which seem to govern a wise Providence in the arrangement of the whole animal and vegetable creation of our earth. When we come to understand this, we can but have increasing wonder and admiration of the infinite wisdom and skill of Him who made, and governs, and upholds all things. But let us study our glass water-box and understand what there is particularly curious about it.

It is called an *Aquarium*, which signifies simply a water-tank of any shape, for rearing water growing plants. This might, perhaps, be more properly named an *aqua-vivarium*, or living water-tank, as it is designed both for animals and for plants. Most persons have seen the common glass globes containing the yellow gold-fish, but those who have tried to keep them know by experience, that it is next to impossible to preserve the fish alive without the most careful attention. To forget or neglect a daily change of water soon results in loss of the fish. The new discoveries will enable us to keep in our houses, or gardens, all the smaller varieties of fresh and sea-water animals, without this constant attention. Artificial lakes, ponds and miniature streams can be constructed at will, and we expect soon to see, even in far inland towns, actual representatives of the bottoms, not only of fresh water rivers, lakes and ponds, but of the bed of the ocean itself. We will not stop now to speak of the intense interest connected with such living, but ever changing pictures of animal life, pictures which no painter's pencil can ever imitate, but we will endeavor to explain in plain language the principles involved in the construction of the Aquarium.

Plants and fishes need to breathe as much as do land animals. Fishes get their air from water. If we boil water, this expels the air, and a fish put into water just boiled will very soon die for want of air. All animated beings, whether in or out of water, require the same kind of air as human beings, to support life. Plants require a different kind of air.

If by the aid of Chemistry we examine the air we breathe, we shall find that each little particle of it is made up of three atoms. Two of these

are alike and are called *Nitrogen*. The other is called *Oxygen*. We may suppose them put together thus: NON. But it is only the oxygen, O, that we need in breathing; and so it is with the fishes and other water animals.

When we take air into our lungs, it comes in contact with the blood, and it finds there little particles of another substance, derived from the food we eat, and called *carbon*. The oxygen leaves the nitrogen in the air, and two atoms of it unite with one of the carbon, and form *carbonic acid*, OCO, so that two particles of air, NON, NON, going into the lungs when drawing in the breath come out thus N, N, N, N and OCO, that is, it brings out a particle of carbon, C. Precisely the same change takes place in the lungs or gills of a fish. The fish, however, may find the oxygen, O, in the water without the nitrogen, N. This carbonic acid, OCO, which comes from the lungs, is a poisonous substance, so to speak, and a person or animal confined in a small space, where it would be necessary to breathe over the carbonic acid thrown out from the lungs or gills, would soon be suffocated.

Now let us see how *plants* breathe. On the leaves, and often on the bark, are myriads of little pores or holes. These draw in precisely the bad air thrown out from the lungs of animals, that is the carbonic acid, OCO. The plant takes away the carbon C, and stores it in its cells, as food to increase its growth, while it sends back into the atmosphere or into the water, the oxygen O, O, which it does not need. Here then we see that a person can go into a very small room and live a long time there, if the room be supplied with a large number of plants, because when he takes in air and sends out carbonic acid into



Fig. 2.

DESIGN FOR PLANTING A CIRCULAR AQUARIUM WITH ARUM (LILY), SUNDEW, FORGET-ME-NOT ETC.



Fig. 3.

- 1 and 2. The Common Sticklebacks (*Gasterosteus trachurus* and *Leiurus*) and their Nests.
3. The Caddis Worm. 4. The Marsh Snail. 5. The Water Scorpion.

the room, the plants take in the carbonic acid and send out pure oxygen again. (It should be stated here, that the plants only send out oxygen during daylight, so that while plants are healthful in the day time, they are not so in a room occupied at night.)

It was the application of the above principles which led to the discovery of the *Aquarium*, or *aqua-vivarium*. Fishes, or other water animals, put into a confined portion of water, after a time, use up all the oxygen it contains, and replace it with poisonous carbonic acid, so that fresh water containing new supplies of air must be given to them. Sometimes all the fishes in a small pond, without plants, will be killed during winter, because the ice on the surface prevents the access of air. They are often seen to rush to a hole cut through the ice, in order to get a draught of fresh air. But put in the water such plants as will grow there, and these will use the carbonic acid produced by the fishes, and return a new supply of pure oxygen for them.

In the glass vessels or aquariums shown in the illustrations, figures 1, 2, 3 and 4, we see fishes and plants together, and though the quantity of water be small, there is no need of changing it, for months or years, since, as above explained, the united breathing of the animals and plants keeps it pure. It will be seen that to have a healthy aquarium, the ratio of plants to animals must be such that their action upon the water will counterbalance each other.

But this is not all that is necessary in an aquarium. It is found that the excrements of the animals and the decaying portions of the plants will, in a short time, render the water foul, and unfit for either animals or plants. A beautiful discovery counteracts this difficulty. We find that water snails of several kinds, as well as various other small animals, actually feed upon these decaying substances. These snails, thus formed from decaying matter, in turn become pure food for the fishes themselves. Did it ever occur to you, reader, that the snails in the bottoms of rivers, lakes and oceans are literally *scavengers*, whose office seems to be to "clean up" the habitations of other animals, and purify the water in which they live. Yet such is the case, and the more we study the Creator's works, the more we shall be impressed with the fact that He has made nothing in vain.

So, then, a perfect aquarium is one which, like the natural reser-

voirs of water, contains animals to breathe oxygen, and form carbonic acid, plants to absorb the carbonic acid and restore pure oxygen, and snails or other small animals to consume the decaying materials of both large animals and plants, and thus keep the water pure.

EXPLANATION OF THE PLATES.

Aquariums are made of various forms and sizes. Figures 1 and 2 illustrate two of the simplest. Figure 1 is a box with glass sides. It may be but a foot or two in length, width and height, or it may be several feet long and wide. An English gentleman, Mr. Gosse, who has made many improvements upon the first discoveries of Mr. Warrington, actually kept over one hundred living specimens in a box like this, only two feet long and one-and-a-half feet wide. He, however, found his vessel too small, and the number of animals was decreased. Those of this shape, now made for sale by dealers in England, are usually formed with slate floors and backs, and zinc columns and mountings. Care must be taken that putty, cement or paint be not so used as to injure the water. The smallest and most simple are about 15 inches long, and 10 inches broad. These may be set upon a mantel, a shelf, or on a small table as here represented. A bed of pebbles and sand, about three inches deep, is placed upon the floor. Pieces of rock are variously arranged to give variety and a pleasing effect upon the eye. A point or two of the rock-work may well project above the water. Various kinds of water-growing plants are set in the sand, such as water-lilies, water-plantains, water-iris, arrow-head, water-cress, marestail, duck-weed, &c. There are, as yet, very few aquariums in this country, except a fine collection just introduced into the *American Museum* in this city. These are a pleasing sight, well worthy a day's visit. We have spent many profitable hours in studying these caged inhabitants of the deep, disporting in their own element, and exhibiting all the natural phenomena of active life. We are glad to learn that the proprietors, Messrs. Greenwood & Butler, are preparing to furnish the glass vessels, ready stocked, when desired, and at reasonable prices.

No. 2 is a common bell-glass, of the simplest, cheapest kind, mounted upon a turned wooden stand. On the top of the two



Fig. 4.

- 1 & 2. Minnows. 3. The Perch. 4. The Tench. 5. The Roach. 6. The Pike.

stones are placed small masses of earth, just above the water surface, so that the roots of the fern, forget-me-not, and sundew planted there will extend down into the water. In the center is the Arum, (*Calla Aethiopica*), a magnificent ornamental plant, that always flourishes best in water. The plants named above may be substituted. The animals are perches, minnows, water-beetles, mud-snails, &c.

Fig. 3 is introduced to show an interesting species of fish, of diminutive size, called the Stickle-back, which builds a nest in the water for its eggs. We must not now take space to narrate the many very interesting peculiarities of this fish. Our readers will find them described at length in an English book, by Noel Humphreys, entitled "Ocean and River Gardens." We are indebted to this work for the originals of the figures 2, 3 and 4. (Fig. 1 was drawn as well as engraved expressly for the *Agriculturist*). We hope some American publisher will soon issue a cheap illustrated edition of Mr. Humphreys' work. The English edition costs \$3. It is, however, beautifully executed, contains 24 finely colored plates, and is cheap even at that price. It should be procured by those who make the first attempts to supply themselves with Aquariums.

Fig. 4 is a section of an aquarium which is sufficiently explained by the accompanying notes.

CHOICE ORNAMENTAL TREES.

The season for transplanting having again arrived, we wish to call attention to a few shade trees, which, though not very common and popular throughout the country, are yet very beautiful, and worthy the special notice of arboriculturists.

The Judas tree, or Red Bud (*Cercis canadensis*). This is not a large tree, it seldom reaches higher than thirty-five feet. It is found sparsely scattered in sheltered valleys, in all parts of the country, from Maine to the Carolinas, though it abounds most on the banks of the Ohio. We have seen it growing even in Florida, but whether indigenous there or not, we did not learn.

The branches of this tree resemble in their general outline, a flattened umbrella. The leaves are exceedingly neat and pleasant to the eye, being of medium size, heart-shaped, dark green above and silvery underneath, and looking as if they had just been washed by a shower. Flowers appear upon the twigs early in Spring before the leaves put forth. They are small, shaped like the pea-blossom, and are of a deep purplish rose-color. They grow in clusters completely covering the branches, and are conspicuous from quite a distance. Hence the name, *Red Bud*. The rosy blossoms of this tree combined with the white of the dog-wood, and the scarlet of the maple, form an agreeable sight in Spring. These flowers are succeeded in Summer by brown seed-pods, six or eight inches long, which hang on the trees throughout the Winter. Its name, "Judas Tree," was given it by Gerard, an old English gardener and writer, in 1596, who relates that "this is the tree whereon Judas did hang himself; and not upon the elder-tree, as it is sometimes said."

This tree grows rapidly enough anywhere, but succeeds best in a cool, moist and half shady situation. Insects do not infest it, nor does the coldest Winter harm it. We do not hesitate to recommend it as one of the finest ornamental trees of medium size.

Cucumber Tree, or Magnolia acuminata. This is more rarely planted than the Red Bud. The impression prevails quite extensively, that it is too tender for Northern latitudes; yet it is indigenous all along the ridge of the Alleghanies, and even as far north as Central New-York. It does not

succeed well in wet soils, yet it prefers one moderately moist and rich. It should be removed from the nursery when young, and be well treated until thoroughly established; then it will take care of itself and reward all the planter's labors.

To those who have seen the Cucumber tree we need say nothing in its description and praise. For the benefit of others, we observe that it is as beautiful as any other member of the Magnolia family, native or foreign. It is often found eighty feet high, and with a trunk three or four feet in diameter. Straight and erect as a maple, its top is even more symmetrical and majestic. The leaves have quite a tropical look, being six to eight inches long and three to four broad. It bears flowers six inches in diameter, pale yellow, sometimes tinged with blue, and slightly fragrant. The cones (fruit) are three inches long, and when green, resemble a cucumber, from which it derives its name. Considering the neatness of its bark, its erect trunk, its well-balanced head, large leaves and flowers and striking fruit, it deserves to rank as a first-class tree. As a nice observer has said: "It is just the tree, in its symmetrical proportions, for planting on the lawn, or near the house, where it harmonizes with the architectural expression of the building."

Tulip Tree or White Wood (Liriodendron tulipifera). Here we have a larger tree than either of the preceding. When growing under the most favorable circumstances, it attains a height of one hundred and forty feet, with a trunk twenty feet in girth. The trunk is generally erect, branches spreading, leaves large, glossy and of a delicate green. The bark on the younger limbs is smooth and ash-colored. The leaves are of a peculiar shape; they are five or six inches broad, and at the point of their greatest width appear to have been abruptly cut off. It has yellow flowers, appearing in June, in shape like a tulip, (whence its name,) composed of six petals which are mottled on the inside with red and green. These flowers from their contrast with the foliage of the tree, are visible at quite a distance and present a showy sight. The tree does not blossom until it is ten or twelve years old. The tulip tree belongs to the family of the magnolias, and is hardly inferior as an ornamental tree to any of its relatives. Downing says of it: "Whosoever has once seen it in a situation where the soil was favorable to its free growth, can never forget it. With a clean trunk, straight as a column for 40 or 50 feet, surmounted by a fine ample summit of rich green foliage, it is, in our estimation, decidedly the most stately tree in North America." Occasionally, when it is planted in exposed situations, the bark of the young tree becomes blistered on the south side, and its growth materially checked. By cutting down a tree so affected, just below the injury, we once obtained a handsomer tree than when it was originally planted. Several branches shot out on every side from the bole and grew up luxuriantly into a grand, globular mass of waving foliage, which is now the daily delight of our eyes.

FROSTED TREES.

A CELLAR TO PROTECT THEM DURING WINTER.

It not unfrequently happens that the farmer, or nurseryman even, receives his bundles of fruit, or other trees, in a frosted condition, and loses a large part of them through ignorance of the best method of managing them when in this state. Of course trees are injured by having their roots frozen when out of ground, but with judicious management the injury which otherwise might prove fatal, may be very much lessened.

When a bundle or box of trees, or plants, is received in a frozen state, do not unpack them, but

place them at once in a cool dark cellar, and allow the frost to come out as gradually as may be with the admission of as little light as possible. After the frost has been entirely removed, they may be unpacked, and if the ground will admit, plant the hardy trees at once, or the whole may be "heeled in" by plowing out a few furrows on a dry spot, and laying the trees down close together, with their roots in the furrow, and cover with five or six inches of soil. The trunks and limbs should be left exposed. Nurserymen often have a cellar on purpose for the reception of trees arriving from France and England during the Winter. They select a dry spot, with a sandy soil if possible, and having excavated the earth for four or five feet in depth, of the desired size, erect stone or brick walls around the sides six or seven feet in height, and cover with a span roof, having windows inserted in it. An entrance of ample size is provided upon the outer side, secured by both trap and inner door, the more effectually to exclude frost. If the soil on the bottom is hard or stony, one foot of sand may be carted and spread over it. Into this cellar bundles of trees are put upon arrival, (if in the Winter season,) opened at a proper time, and the trees set out in rows, to remain till Spring. The rows are very near each other, just admitting a person between them, and three to six trees may be set abreast each other in the row, thus economizing space. A barn or other cellar might be used for a similar purpose.

PLANTING TREES.

To the Editor of the American Agriculturist:

I have just read J. F. Hunt's communication in the October number, on digging holes and planting trees, and before finishing his "deep hole digging," I jumped at the conclusion, viz.: *one grand failure*. I often get quite nervous when one talks of digging deep holes in hard pan and filling up with rich composts, as I once fell into one of these three-foot-holes, taking a Winter soak, while in an absorbing pursuit of a flock of quails. Experience teaches that in planting, the roots should continue their growth in the same straight forward manner in which they commenced. The holes should be very broad, but should not extend one inch into the hard-pan or impervious clay. You may enrich the soil in which the roots are to grow to your heart's content, but do not decoy them down into a hard-pan trap, where after gorging themselves for a season the roots are left to water-rot in their attempts to penetrate a stiff clay. Never stake trees for an orchard. They will rebound from a hard wind, but the stakes will not. If the trees lean to one side root-prune upon that side in the Spring, and straighten them by degrees after rains. For planting peach trees, an old Pennsylvania adage runs "a careful taker up and a lazy planter,"—meaning good roots and a shallow hole. After such planting however, if not after all planting, the ground should be plowed.

To those planting trees this Fall I wish to say with emphasis, pause when the spade strikes into and throws up clay, and listen to the death cry of tens of thousands of murdered trees.

C. G. SIEWERS.

CINCINNATI, October, 1857.

REMARKS.—We say, hard-pan, or no hard-pan, dig deep broad holes, and fill in with good surface soil, but always provide drainage enough to keep the bottom of the holes free from standing water at all seasons. If you can not plant one-hundred trees on a hard-pan, and provide the necessary drainage, then plant fifty. One tree on deep good soil is worth two on a shallow soil having an impervious subsoil a few inches from the surface.—[Ed

STRAWBERRIES—CHAPTER IX.

WHAT CONSTITUTES A GOOD VARIETY.

Having gone over the whole ground of Strawberry culture, and there being nothing to do in out-door operations this month, save the Winter protection of the plants, which has already been described, we will close this series of chapters for the present season, with a few hints to those who may hereafter bring to notice new varieties.

We think there is a necessity for some criterion by which to judge of the comparative value of new Seedling varieties. It is not sufficient to say that a strawberry is very productive, or very large, or of excellent quality. We wish to know how many points of excellence it possesses. Why is it that Hovey's Seedling has maintained its predominance over almost every variety for twenty years? Simply because it possesses so many points of excellence. We will name seven which compose our beau-ideal of a Strawberry.

1. *Vigor*.—Plants that will attain a good size under ordinary treatment, or that will throw out a number of new plants. The Crimson Cone is a good example. If kept clear of runners it will make a large stool. If suffered to run it will soon fill a broad space, one plant will cover thickly more than a square yard. Some single specimens have sufficient vigor to produce in one season, a hundred new plants.

2. *Hardiness*.—This includes the quality of resisting the Winter's frost, and the Summer's sun. Some kinds are injured by the severe cold, others are scorched by the heat of Summer. Many of the European varieties of much merit are entirely worthless when exposed to our hot sun. This is the case with the Fill-Basket, Myatt's Pine Seedling and the British Queen. (See illustrations on page 84 April No.) Plants can be protected in Winter, by covering, but they can not be shielded from the sun's rays.

3. *Productiveness*.—This is a *sine qua non*. Those who plant strawberries want fruit. Under this head we wish to know what quantity of fruit has been produced from a square yard under a specified mode of culture. If the plants are *hermaphrodite* or perfect, we wish to know what proportion of the blossoms will produce fruit.

4. *Good Size*.—This refers to uniformly large and regularly formed berries. Hovey's Seedling may be taken as a standard of comparison.

5. *Good Quality*.—Solid, rich and juicy, are the components of quality. Here also Hovey's may be referred to as a standard.

6. *Beautiful Color*.—The color should be bright scarlet, or crimson, and permanent. When strawberries are raised for market the color is a matter of much importance. Some berries, although bright and beautiful when first picked, lose their color after being exposed a few hours, and become dull and stale looking. This was the objection to Hovey's Seedling, when first introduced in the New-York Market. The Large Early Scarlet and the Crimson Cone owe much of their popularity to the fact that they retain their bright color for a long time.

7. *A reflexed Calyx*.—By this we mean the quality of having the hull bent back from the fruit. This may not seem to be a matter of much importance, but where there are many to hull it is a consideration. In some kinds the calyx adheres so closely to the fruit that it can not be removed without mutilating the berry.

We do not know of any variety comprising fully all these points of excellence. But we think it possible that they may all be realized yet; and even if they should not, it is well to have an *ideal* before us, that we may combine and select with reference to it.

Comparing Hovey's with our ideal we find it fails in *quality* and *color*. The fruit is somewhat dry and not very high flavored. The color is good when first picked, but it soon becomes dull. If it had the color of the Early Scarlet it would be the most desirable market fruit of any yet introduced.

Longworth's Prolific is a little defective as regards hardiness. The leaves are liable to be burnt by the sun, especially if the plants are old and the weather dry and hot. On this account it succeeds best when the bed is renewed every year. The calyx adheres too closely to the berries, especially in the small sized ones.

Burr's New Pine was much thought of for a time. Its great excellence consisted in its fine aromatic flavor. It was deficient in vigor and deficient in size, and only moderately productive.

CONVENTION OF FRUIT-GROWERS.

Leaf Blight and Cracking of Pears—Pears on Quince Stocks—Best Form and Age of Trees for Planting—Raspberries—Blackberries—Vote on Merits of several Varieties of Fruits, &c.

The Western New-York Fruit-Growers' Association held their autumnal meeting at Rochester, Sept. 18 and 19, at which was a good attendance and a fine display of fruit. J. J. Thomas, of Union Springs, occupied the chair, and the discussions throughout were of an interesting character. The causes of the leaf-blight, and cracking of the pear, was the first subject which claimed attention, but after a lengthy discussion, the subject was left with a recommendation to plant varieties not liable to these diseases, and a committee was appointed for further investigation, to report at the next meeting.

Another question of much interest was, "whether the pear on quince could be profitably cultivated on a large scale for market purposes." This called out a free expression of opinion from those who have given much attention to the cultivation of this fruit, and the opinion seemed to obtain, that with a proper selection and planting, good tillage, and judicious management, they might be a profitable market crop. It was recommended to plant them in rows, near together, and work like corn.

The form of the tree best suited for a standard pear was next discussed, and the prevailing sentiment appeared to be that the Pyramid is the best form, allowing the trees to branch near the ground. On the question, "what age is best for planting apple and pear trees from Nurseries to orchards to insure success," there was but one prevailing sentiment, and that in favor of planting small trees, two years from the bud for pear, cherry and plum, and three years at most for the apple.

The smaller fruits claimed some attention, and among raspberries Brinkle's Orange was recommended, together with the Hudson River Antwerp. Of blackberries, the New Rochelle was highly praised. It should be allowed to fully ripen before picking. A resolution was unanimously adopted to call this fruit (sometimes termed the Lawton) the New Rochelle Blackberry.

A list of apples, pears and peaches, for marketing, was balloted for, and resulted in the following preferences,—those first named having the highest vote:

Apples.—R. I. Greening, Baldwin, Roxbury Russet, Red Astrachan, King of Tompkins Co., Tolman Sweet, Northern Spy and Esopus Spitzenburg.

Pears.—Bartlett, Louise Bonne, Duchesse d'Angouleme, White Doyenne (!), Easter Beurre, Lawrence, Seckel, Vicar of Winkfield and Flemish Beauty.

Peaches.—Crawford's Early, Crawford's Late, Old Mixon free-stone, and Early York.

GRAPE CULTURE—NO. XI.

BY WILLIAM CHORLTON.

Most of our labors for the present season are now finished, and according to good or bad management, or injurious effects of the wet and cold Summer, so have been the results. In consequence of this latter drawback, the wood of all out-door grape-vines, and also that in most cold graperies, has not thoroughly ripened, which renders it necessary to assist by artificial means to make up the deficiency. This, in out-door culture, may be done by removing the superfluous shoots, thus allowing the sun to act upon the branches, and further centralize or ripen the juices, thus reducing the quantity of aqueous matter contained in the vine. Do not, however, injure the leaves on the remaining branches, as respiration would be checked, and the object intended to be gained prevented. It is advisable to follow up the same course with late crops under glass, and, in addition, to deviate a trifle from general practice by keeping the house a little warmer than usual. This may be accomplished by keeping the lower ventilators closed, by which a higher temperature will be maintained near the bottom of the house. A free circulation, quite sufficient for all purposes, may be admitted by the upper openings. A genial and dry atmosphere will thus be secured, which will enable the vines to complete the ripening process without check, and if the house be entirely closed at night when there is danger of frost, the leaves will be kept in a growing state for a longer time. Never let a grape vine leaf be injured by extreme cold before it is mature, if it is possible to avoid it. So long as it remains green, it is doing service to the vine. In a healthy plant of any kind, when nature has accomplished her purpose she will cast off the useless parts, and any interference in this particular leads to injurious effects. Where new plantings are intended, the early part of this month is the best time for making preparations, as the needful operations can now be executed much better while the ground is in good working order, and not saturated with water. For the vineyard, drain if necessary, plow a deep furrow, and follow with the subsoil plow; or when only of small extent, trench two spits deep. Nothing will be lost by the extra labor. If the soil be not naturally very fertile, add a good dressing of barn-yard manure, or an abundance of rotten leaves. In the August number mention is made of the good effects of swamp muck, by Mr. John Ellis, of Fox Meadow, which I would fully indorse, when properly applied, and the use of which he well understands. Choose the large tussocks and the fibrous upper surface of the muck swamp, throw these into a heap, and as the work proceeds mix a portion of powdered lime, say one barrel to each twelve cart loads; let it remain through the Winter, and afterwards, cart or wheel it over the piece to be planted. Dig or plow it in, and you have one of the best auxiliaries either for the graperies border or outside culture.

Those who only wish to plant a few hardy vines, and have their land in a good state for the purpose, may do so at the commencement of this month. It is not advisable to defer it later in the season. The best choice of plants is generally to be obtained in the nurseries at this time, which is an object. If removed early enough, and the roots are kept moist until they are again planted, they will be in a good condition for a vigorous start in the Spring.

The wood in the forcing house ought now to be thoroughly ripened, with no leaves remaining, which is a seasonable time to prune. After

pruning, remove all the loose bark, and clean well around the bases of the knots to prevent insects lodging therein. Wash the vines with the preparation advised in February, taking care not to injure the buds. Keep the house as cool as possible, and let the vines rest so until the time to commence forcing, which will be according as early or later grapes are wanted. To obtain ripe fruit by the middle of May, it will be required to begin by the middle of December, and later in proportion. Such extreme artificial culture should not be attempted by the novice, however, as it requires considerable experience, and is attended with much care and expense. Grapes still on the vines, either under glass or out-doors, need not be cut at once; one or two degrees of frost will not hurt them even if wanted to keep. If more frost is apprehended, they may be removed and preserved, as advised last month. In the retarding house, or where there is a heating apparatus, a gentle fire should be applied on such occasions, but admit air freely, excluding any moisture.

FALL PRUNING OF GRAPES.

The time has now arrived for the great annual dressing of hardy vines. For this latitude, we much prefer Autumn for doing the principal share of this work. In the first place, it will ordinarily be done better now than amid the snows and frosts of Winter. And secondly, if done soon after the dropping of the leaves, the organizable matter which would otherwise be distributed among all the shoots and buds of the entire vine, is accumulated in the shoots and buds left after the pruning, the advantage of which will appear in the increased size of the fruit next season. Thirdly, vines pruned in Autumn, can be much easier handled when the time comes for loosening them from the trellis and laying them on the ground for the Winter—a practice we decidedly recommend for the Northern States. Moreover, vines pruned in mid-winter are apt to lose one or more buds back from the incision; and if pruned in Spring they are certain to bleed badly, a thing we don't like to see, even if it does the vines no sensible harm. These reasons are theoretically sound, and we have tested their practical importance for several years on our own premises.

But without dwelling longer on this part of the subject, we wish to say a few seasonable words on the manner of pruning. And, for the benefit especially of our new subscribers, we will show the method of dressing a vine for several years.

One principle should always be borne in mind, that the grape bears its fruit on shoots of the current year's growth, which spring from buds on shoots of the preceding year's growth. This is the key to the whole mystery of vine-dressing. We will now suppose that the reader has a young vine in his garden, which has made a year's growth since it was planted. It looks, perhaps, like figure 1.



Fig. 1. If your vine is a choice variety which you wish to multiply, you can bury the cuttings just taken off in some dry place in the garden, and on the opening of Spring set them out. Prepare the ground well by deep spading, put in the cuttings, leaving only one bud on each above ground, mulch the soil in Summer, and in ordinary

Cut off, now, all of these shoots, except the strongest, and prune that back, leaving only two buds of the present year's growth. It will then look like figure 2. And here, we will add, parenthetically, that if



Fig. 2.

seasons, two-thirds of the plants will grow well. New hands at grape growing are altogether too tender-hearted, or too tender-handed. It seems to them like a waste of the vine to cut it back to within two or three buds of the ground, as shown in fig. 2. But be assured that to produce a good root and strong branching vines which are at all times under your control, you must begin at the very outset to use the knife freely. In a large, flourishing and profitable vineyard which we visited at the West the past season, all the vines are cut down to within three feet of the ground every year. They run upon a low trellis made by setting rough posts five feet apart, across which are nailed long, strong laths forming a sort of fence. The grapes are never beyond one's reach.

But to return. The buds left on the original vine will push early the next Spring. After a few week's growth, rub all off except the strongest shoot, and allow that to extend itself until Autumn. During the Summer, pinch off all laterals, (side shoots), and cut out any suckers springing up from the root. In the Fall, we shall have the following picture.



Fig. 3. will probably display a few clusters this year, but they must be taken off, because the vine is not yet vigorous enough for fruit-bearing. In the Fall our plant will look thus:

Third Year.—The two strong canes fig. 4, should now be shortened to two or three buds of the new growth, and tied to the lower bar of the trellis, which we will suppose has just been erected. Or rather, we would advise to lay them on the ground for protection in Winter. The following Spring they may be raised and tied to the lower horizontal bar of the frame. During the Summer, the bud on the extremity of each cane should be allowed to grow at random on the trellis. This is done in order to enlarge the foundation or frame-work of the vine. One other bud also should be allowed to grow upward from the horizontal arms, on each side of the central trunk. Laterals and suckers should still be kept in check. At the close of Summer we shall have this picture:



Fig. 5.

Fourth Year.—The canes which have grown at random from the ends of the horizontal arms should now be shortened back to within about two feet of their last year's length, and then brought down to the lower bar of the trellis. The other two canes must be pruned to about four feet. Next Summer, these upright canes will throw out laterals on which clusters of fruit will appear. Two or three bunches may be allowed to grow and ripen on each spur. In the meanwhile, the

terminal buds of the horizontal arms will throw out canes for prolonging the vine on each side, and new upright canes will grow up between the fruit-bearing shoots to furnish new wood for bearing fruit the next year. Only two new upright shoots should be suffered to grow, the weakest being rubbed off. And thus, two new upright canes may be added annually, and the horizontal arms extended, until the trellis is covered. The vine will then have this appearance.

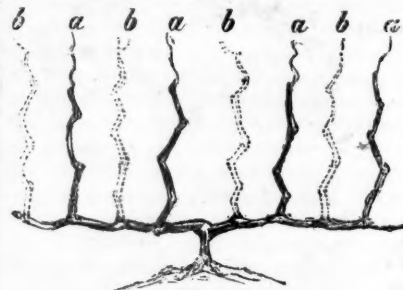


Fig. 6.

After this, the pruning may be done according to the renewal, or the spur system. If the renewal is preferred, the method is as follows: Cut out, in the Fall, the dark lines, *a, a, a*, which have borne fruit the current year, leaving a strong bud at their base. The dotted lines, *b, b, b*, are shoots which have grown up the current year while *a, a*, have been bearing fruit. These are to be left to bear fruit next year. While these again are producing clusters, new canes will be growing up from the strong bud left at the base of *a, a*. After *b, b*, has borne fruit one year, it is to be cut out, to give room again for *a, a*, to do the same. And so on alternately from year to year; the principle being always followed, that the growth of one year bears fruit the succeeding, and then is removed.

If the spur-system is chosen, the upright canes are not allowed to grow nearer to each other than two feet, and then are kept in place permanently. The side-shoots which spring out from them are cut back every Fall to one or two strong buds. Fruit-spurs grow from these buds. It is recommended by some, always to leave two buds, one of which shall furnish spurs for fruit-bearing the current year, the other to furnish eyes for growing the next year's crop.

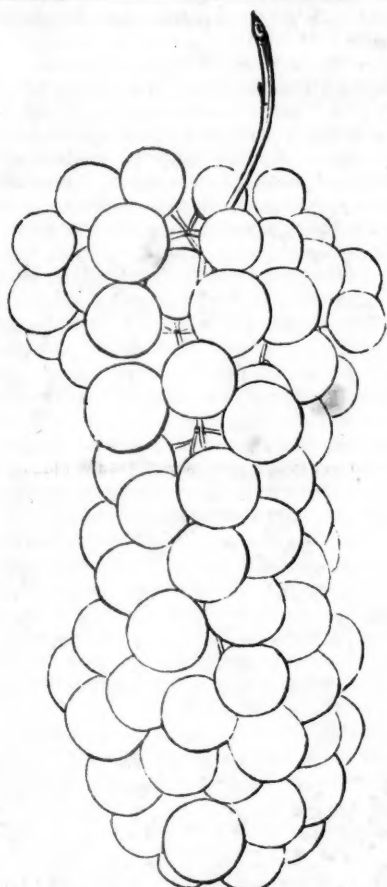
Thus, (fig. 7), *a* is the bearing spur of the present year, and to be cut clean out in the Fall, leaving *b* to fruit next year. And while *b* is fruiting, *a* is pushing again, and so on annually. It is objected to this by some, that this is unnecessary trouble, and that two shoots render the foliage too crowded for the successful ripening of the fruit.

The renewal method is considered the best for native varieties, which are rampant in their growth, often sending up strong shoots from the base, fifteen or twenty feet long in a single Summer. The spur-system is best for slow-growing sorts, which are chiefly foreigners.

In our own grounds we have sometimes practiced a combination of these methods, and we like it. We have trained vines in a fan-shape; the canes diverging, like the spokes of a wheel, from the central trunk to the top of the trellis. So long as a shoot retains all its buds sound and plump, we let it stand, and prune it according to the spur-system; when it fails in any respect, we cut it out and train up a new one in its place from the base. We like this method, because it enables us to remedy at once any defect in the vine, and chiefly, because of the facility with which canes so treated can be laid down for protection in Winter.



Fig. 7.



CLINTON GRAPE

GRAPES—REBECCA—DELAWARE, CLINTON.

We present on this page engravings of clusters of Rebecca and Clinton grapes, which, with others, were referred to on page 158, (Aug. No.) We intended to have introduced a cluster of the Delaware, a more valuable grape than the Clinton, but could not get the cut in season. The Delaware somewhat resembles the Clinton, here shown, but the fruit of the former is a little larger, and the cluster usually more shouldered.

Our attention was especially called to this subject, at this time, by the reception of some clusters of the Rebecca and Delaware, received Oct. 1st, from Mr. Brocksbank, of Hudson, N. Y., who is the well-known propagator of the Rebecca. These samples have been in our possession for two weeks, and though standing upon the table in a warm room, they are still in excellent condition. We have tasted them several times, and submitted them to good judges who have incidentally called, all of whom agree with us in pronouncing them of superior quality.

The berries of the Rebecca, which are very accurately represented in our cut, are considerably larger than those of the Delaware, and to our individual taste they are preferable. Their white color and sweet flavor are scarcely excelled by the finest foreign grapes. This grape has proved perfectly hardy, both at Hudson, N. Y., where it originated, and at other points still further north. Its early ripening, nearly two weeks before the Isabella, together with its hardiness, good keeping qualities, and superior flavor, render it a decided acquisition to our stock of native grapes.

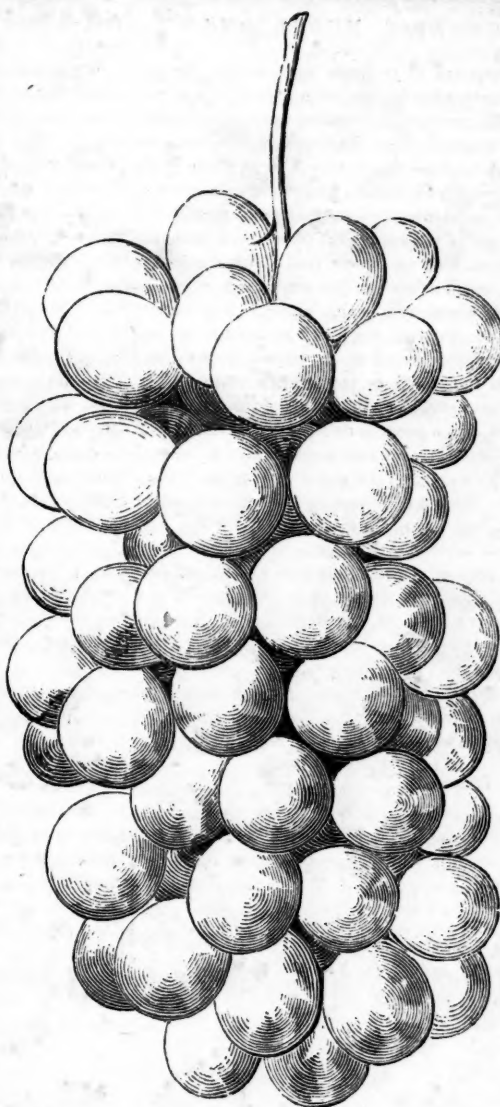
Since writing the above, we have looked into the new edition of Downing's "Fruit and Fruit trees of America,"—very high authority by the way—and find the following description of the

Rebecca: "Bunches nearly cylindrical, about four inches long by two and a half inches in diameter, very compact and heavy, often shouldered. Berries of full medium size, oval, and generally much compressed, strongly adhering to the peduncle. Color light green in the shade, auburn or golden in the sun, and covered with a light bloom, considerably translucent. Flesh of some consistence, juicy, sweet, and delicious, with a perceptible native perfume, but very agreeable. It has no toughness or acidity in its pulp, and ripens eight or ten days earlier than the Isabella, and keeps a long time after it is gathered. This superior white grape is undoubtedly a native, a chance seedling in the garden of E. M. Peake, of Hudson, N. Y., where it has been growing about nine years, and proved perfectly hardy and productive. It is not so vigorous in habit as the Isabella and Catawba, but healthy, and not disposed to mildew; and being exceedingly beautiful, as well as excellent, it must be regarded as a very great acquisition."

Referring to the Delaware, the same authority says: "Its fruit bears a strong resemblance to the Traminer, and the Red Resling, two celebrated wine grapes of Germany, but from which, in wood and foliage, it is as distinct as any of our native grapes. It is free from blight and mildew, never prematurely losing its leaves, and seeming to luxuriate in our climate, which cannot be said of any foreign grape with which we are acquainted. Bunch small, very compact, and generally shouldered. Berries smallish, round when not compressed. Skin thin, of a beautiful light-red or flesh-color, very translucent, passing to wine color by long keeping. It is without hardness or acidity in its pulp, exceedingly sweet but sprightly, vinous and aromatic. It ripens early, or quite three weeks before the Isabella (!). Its branches and berries are very greatly increased in size by high culture." The precise origin is uncertain. It was found in an indiscriminate mass of vines brought by a German to Delaware County, Ohio, for sale, and is said to have come from the garden of a French gentleman in Hunterdon County, N. J. The origin of the grape is, however, now a matter of no importance; the quality is the thing sought after, and that is certainly good. For further description of these and other new varieties of native grapes, see our article on page 158, above referred to.

DR. UNDERHILL'S ISABELLA GRAPES.

While paying our respects to our new and promising acquaintances, Rebecca and Delaware, we must not forget our long time favorites, the Isabella and Catawba, and especially the former as grown by Dr. R. T. Underhill, of Croton Point Vineyards. We have just received our annual basket of these, and they seem to grow better and better every year. They are certainly larger in cluster and berry this year than previously, with no diminution of good quality that we can perceive. We wish the Doctor would tell us this year how



REBECCA GRAPE.

many he sends to this city, for we can scarcely pass a fruit store, or corner fruit stand, without seeing monster baskets labelled, R. T. U., filled with such fruit as would lead one to imagine ten-thousand spies had just returned from some newly discovered Canaan.

THE "HOP TREE" AGAIN.

In referring to the so called "Hop Tree" on page 232, last month, we gave as its probable name, *Ostrya Virginica*, or American Hop-Hornbeam. We have since received from H. C. Williams, of Georgetown, Ct., a few of the seeds and leaves, and on examination of these we find it to be the *Ptelea trifoliata*, which is more of a shrub than a tree, as in its wild state it seldom grows above the height of ten feet. It is a native of the Middle States, and flourishes well on almost all kinds of soil, even in a partial shade. It is a pretty ornamental tree. The seeds grow in thick clusters or panicles, and present a beautiful appearance. We have tried a few and found them apparently to answer a similar purpose to common hops in yeasting. We should doubt the profitability of growing this shrub or tree solely for its seeds, or "hops," though these, if found useful may furnish an additional consideration for planting it as an ornament.

Nobody can stand in awe of himself too much.

GROWING MUSHROOMS.

In response to frequent inquiries we present some particulars on the culture of this singular vegetable production, beds for which may be made at this season. The Mushroom (*Agaricus campestris*,) is often found growing wild along paths much trodden by horses, from whose manure it springs spontaneously under favorable conditions. As frequent serious results have often occurred from mistaking poisonous toad-stools for Mushrooms, much care should be exercised in distinguishing them from each other. Toad-stools have a longer stem, are slimy to the touch, emit a disagreeable smell when broken, and usually grow in the woods or sheltered positions. The true Mushroom, in a wild state, grows only in open grounds, has a peculiar delicate odor, is fleshy and somewhat brittle, of a brownish white above and a pale pink color on the under side of its cap or pileus. They are frequently broiled, stewed or pickled, and are much employed in making cat-sups and as seasoning to soups of various kinds.

The seed or spawn consists of white threads or strings, which are often seen in the compost of a spent hot-bed, or in the droppings of grain-fed horses which have partially fermented in a heap under cover. This spawn may be collected for forming a bed, but it is usually more economical to get the "Mushroom bricks" direct from dealers in seeds, or nurserymen who generally keep them on sale at 10 to 12 cents apiece.

The seed bricks may be made thus: Take equal parts of fresh pasture loam, cow manure and horse-droppings—that from high-fed horses is best—and mix with just water enough to form a batter like grafting wax. When this has stiffened a little, mold it into the form of common bricks and set on edge to dry in an open shed, turning them daily. When half dry make a hole in the center of each, insert a piece of spawn brick an inch in diameter and plaster over with the portion taken out moistened a little, and then dry them thoroughly. When no purchased spawn brick can be obtained, enough seed to begin with can be found by searching in a manure heap where it grows spontaneously as above described. When thoroughly dried make a mound or pyramid of the brick, the spawn side up, on a floor or the ground under cover, putting down first six inches of dry horse manure, then a layer of bricks, then a sprinkling of dry partially fermented manure, then another layer of bricks and so on until all are used. Cover the heap with four or five inches of horse manure to maintain a gentle temperature through the whole. If properly made, fine white threads will soon begin to penetrate the mass, and in about a month the whole bricks will be filled with spawn, when they may be stored in a cool dry room, and if kept from frost they will remain good for years.

The Bed for growing the Mushrooms may be made in a dry cellar, green house, or shed protected from frost. The most simple plan is to use a box or barrel. Begin by collecting daily fresh horse droppings from the stable, throw into a heap and turn often, or spread when much heat is generated. In a couple of weeks or so, when they have become moldy and partially dry they are ready for use. First put into the barrel or box five or six inches of fresh stable manure, then as much of the moldy prepared portion, pressing it down firmly. Thus alternate the fresh and prepared manures until the vessel is full, making the last layer of the partially dried droppings. After standing a week, break one of the spawn bricks into small pieces and insert these a little below the surface; beat down and cover with two inches of fine loam or sandy mold. A few barrels

thus prepared will give a full supply for a small family.

When wanted in larger quantities, choose a convenient place in one side of a cellar or shed protected from frost, and lay down a few inches of litter, covering with a foot of the moldy droppings prepared as above, and tramp the whole solid. This will soon ferment like a hot-bed. After a few days examine its temperature by inserting a stick and let it remain a few minutes. If quite hot on withdrawing it, reduce the temperature by making small holes in the bed. When the heat remains steady at 65° to 70°, that is, a little below summer heat, plant all over the surface, small pieces of the spawn brick of the size of a walnut, putting them an inch or two deep and six inches from each other. Cover over with loam as noted above. If the bed at any time appears too dry sprinkle moderately with tepid water. If the heat declines cover with straw. The best room temperature is about 60°. Young Mushrooms should appear in five or six weeks from planting the spawn. Such a bed will continue in bearing several months. If it begins to decline at any time, another planting of spawn will often bring it into fruitfulness again. A bed four feet wide to ten feet long will furnish an abundant supply for a large family. In gathering, twist out the Mushrooms in preference to cutting off, as no portion of the stem should be left to brood or harbor insects.

HINTS ON WATERMELONS.

All fruits and vegetables, of tropical origin, appear to have suffered in localities north of this, from the superabundance of cold and moisture, in the early part of the season. We hear, on all hands, complaints of poor squashes, nutmeg melons, and watermelons. The crop from the south has been very abundant, but most nutmegs, that we have discussed this season, have been wanting in flavor. Gentlemen, who have forcing boxes, have probably secured good melons.

But we planted ours in the open ground, having usually succeeded in securing perfect specimens, and of better flavor than the same varieties from the south.

THE GREEN IMPERIAL

we have cultivated for four seasons, and have found it an excellent variety. It is of globe form, a yellowish green when ripe, with a very thin rind, and a light red core. It is the heaviest melon of its size, with which we are acquainted. Some of the specimens, in good seasons, reach a weight of twenty pounds and over. The flesh is beautifully veined, and of excellent quality.

THE ORANGE WATERMELON

disseminated by Mr. Peabody, of Columbus, Ga., has not met with so general favor as was anticipated. Some cultivators have professed themselves disappointed, and do not pronounce it, even good. But we think their judgment must have been based upon specimens from impure seed, or from those imperfectly grown. This fruit, when well grown, and deprived of its skin, in which way alone it should be served, is one of the most beautiful dessert fruits, that can be imagined. The flesh is lacking in solidity, and we must say is not quite equal to the Green Imperial, though very good.

THE BRADFORD

in our judgment, is a better melon than either of the preceding. We received the seed three years since, from W. Sumner, Esq., of South Carolina, with several other varieties. Its appearance is much like the Mountain Sweet, the flesh is white, juicy and sugary, the perfection of its kind. The seed we believe is only in the possession of

amateurs. It ought to be universally disseminated.

KEEPING CELERY IN WINTER.

Directions for the culture of celery were given in the August *Agriculturist*, page 183. Several methods are adopted for keeping in Winter, depending upon climate, situation, quantity, &c. In warm latitudes where there is little snow, and the ground is frequently thawed out during Winter, a good plan is to dig a trench on the south side either of a tight board fence or of a building. Take up the plants with most of the roots attached, and set them into the trench close together in double or triple rows, making as many trenches as may be necessary to hold the entire crop. Sprinkle in dry sand or loam enough to nearly hide the leaves and cover with boards placed in a shelving position so as to carry off rain. On the approach of very cold weather, straw should be crowded under the boards to prevent hard freezing.

In colder latitudes, take up the plants, cut off a portion of the leaves, and pack into a box or barrel, with the roots down. After putting in as many side by side as there is room for, sift in enough dry sand to cover them and put in another layer, sanding as before, and so on until the box or barrel is full. Keep in a cool dry cellar or room where little frost can reach them.

For a third method, set the plants closely together on the bottom of the cellar, and cover with sand nearly to the top. Stored in any one of these methods they will keep well, and be ready blanched for use at any time desired.

KEEPING CABBAGES IN WINTER.

To preserve cabbages through the Winter and still have them accessible at all times, select a perfectly dry spot, and open a trench with the spade or plow. Take up the cabbages with their roots attached, inverting them as you proceed to allow the water to run out from the heads. After pulling a quantity and standing them on their heads until they are thoroughly dry, set them out thickly in the trench, in their natural position, covering with earth nearly to the head. Open another trench as near this as the heads will admit of, and set out a second row. Proceed in this manner until all are used, when a temporary board shed may be erected over the patch, four feet high in front, and sloping to near the ground in the rear. This should be sufficiently tight to carry off all the water, but the ends may be left open for ventilation, closing with straw only in very cold weather. Cabbages will keep in this situation until Spring. If water is prevented from entering the heads, the freezing will have no injurious effect. When wanted for use cut off the heads, and if frozen soak in well or spring water for a few hours before cooking. This will take out the frost gradually, and also remove any disagreeable flavor.

Another and very common method is, to stand them upon the level ground, with the roots up, and turn a furrow against the row upon either side. An additional covering is given by banking up the earth about them with a spade, until the heads are entirely buried. They keep pretty well in this manner, but cannot be easily got out when the ground is frozen hard.

Another plan which we have pursued with success, is as follows: Transplant the cabbages into close single rows, say 12 feet long, setting the heads nearly down to the surface of the ground. At each end of the row drive a crooked stake, and put a pole across a few inches above the heads. Lay upon each side some straight

straw, to make a pointed roof over the heads, and shovel on a thin layer of earth at first, increasing its thickness as colder weather comes on. The frozen earth can be chopped away at any point, and the cabbages removed as desired, closing the opening made with earth or a bundle of straw. The cabbages will grow and increase in size all Winter, if an opening be left at each end for the access of air, closing it only in case of extreme cold. It is necessary that the earth be packed so as to shed off the rain, as the straw, becoming wet, will rot and injure the heads, though it ought not to be allowed to come in direct contact with them. The mice sometimes get in and destroy the cabbages. If discovered by their holes, they should be trapped immediately.

Still another method we have found to answer well, and to require little time. Lay down two poles or rails upon the ground, two to four inches apart. Turn the heads down upon these and cover them with a few inches of earth, smoothing it off to shed water. On the approach of very cold weather, put a large quantity of earth upon that portion of them desired for Winter use. We have removed the snow, cut off the frozen earth with an old ax, and taken out the cabbages in fine condition during the coldest season of mid-Winter.

GOOD GARDEN PEAS.

As the gardening season is over, it is well to sum up the results of our experience, while they are fresh in mind.

THE DANIEL O'ROURKE

which was sent out from the Patent Office, two or three years since, is comparatively a new variety in England, where it first attained its celebrity. Its chief excellence is as an early variety, maturing a few days sooner than the Prince Albert, Early Kent, and other early varieties. It is a good bearer, the pods are of good length, and well filled with a pea of excellent quality. It should be sown early, in order to secure the best results. It is comparatively worthless for a late crop. We are much pleased with this variety, and think it worthy of the attention of market gardeners, as well as of those who plant only for family use.

THE CHAMPION OF ENGLAND

maintains its place; as the best pea for the main crop. We never saw this vegetable in its perfection, until we fell in with this variety some four or five years ago. It is a shrivelled pea, of large size, and very sweet and delicious. It is a standard of excellence. The vines grow stocky and bear a profusion of well filled pods. We are surprised to find, that this pea is not more generally known. Not one farmer in a hundred has ever seen or tasted it. It ought to have a place in every garden where peas are grown, and to form the main crop of market gardeners.

STANLEY'S MARROW

we have tried for the first time this season. It is a fine large pea, later than the Champion of England, and nearly as good in quality. It shrivels like it, but is of lighter color. It does not bear quite as well, but is in every respect a valuable sort, and worthy of a place in our gardens.

EPF'S LORD RAGLAN

has lately been introduced from England. It matures about the time of the Champion, and is nearly as good in quality. It is not so stout a grower, nor so large a bearer, but is worthy of cultivation.

THE GREEN MAMMOTH DWARF

is a great improvement upon the old Bishop's Dwarf, and ought to supercede it. The pea is of very large size though the vine is a true dwarf;

it is a good variety for small gardens, where bushes would be in the way

TREAT YOURSELF TO ASPARAGUS.

Of all cultivated things in the garden, we think there are few better, cheaper, and at the same time more substantial luxuries than the asparagus—we say substantial, because, while it affords pleasure to the consumer, it yields nourishment. As to its cheapness, there may be a difference of opinion; but it is to be taken into the account that a bed once well made is a permanent investment, requiring comparatively little care, and giving an annual return. At page 159, July No., a correspondent describes a bed made in 1819, which has continued productive during thirty-nine years, yielding a fair crop the past season. A bed 25 feet square will give a daily supply for a large family during its season, after the first two or three years. Our own plot was set two years ago this month, with two-year old plants obtained from a dealer, and the past season it gave a cutting of large shoots every other day. Full directions for planting have already been given in this volume, at pages 18 and 159, Jan. and July, Nos.

A GOOD JOB IN THE GARDEN.

We have annually recommended our readers to dig over their gardens in Autumn, throwing them into high ridges, and we are every year becoming more convinced of the value of this mode of treatment. A finely pulverized soil is of the first importance for any crop, and particularly for gardening. Jack Frost will certainly do the pulverizing faster, better and cheaper than it can be done by any other agency whatever, if you will only give him a chance at it. Before Winter sets in, spade or plow the surface into as high, narrow ridges as you possibly can. If possible make them three-feet higher than the bottom of the intervening furrows, leaving it like the following:

AAAAAAAAAAAA

Spading or plowing gardens and fields designed for any kind of Spring crops, affords very many advantages, which are specially manifested on clay lands. Prepared as above the, ridges freeze through, and in thawing crumble down; while the frost penetrates below the bottom of the furrows, and the whole soil is rendered pulverulent, and improved, and is enriched by the ammonia collected from snows, rains, and the air, during Winter.

There is generally more time for plowing in Fall, than in Spring when getting in the Spring crops, carting manure, &c., all crowd together. The teams are generally in better condition for work in the Fall than after passing through a long Winter.

Ground plowed in ridges, with deep open furrows between, dries out sooner, and on wet land several days may be gained, which is often enough to turn the scale in favor of a good wheat or other crop.

The action of frost is very important in destroying and pulverizing the mineral elements and thus reducing them to that fine impalpable state necessary to giving a good medium for the growth of roots. Much poisonous matter in the soil is destroyed, since the frost and air penetrates a double depth where deep open furrows are left.

The organic or vegetable matter, such as roots of plants, are decomposed more rapidly when subjected to freezing and thawing, as is the case when the ridged soil is more thoroughly exposed to frost. The roots of docks and other noxious weeds are more thoroughly killed out. Insects

that burrow deeply in the soil are killed by exposure to frost.

These considerations are enough, we think, to recommend plowing all heavy soils in Autumn, where it can be done without serious neglect in the saving and threshing of crops already grown. Light, dry, sandy soils do not so strongly call for such fall treatment, though we think any soil will be benefitted. Let garden soils and those designed for high cultivation be deeply spaded now; but if necessarily omitted now, let it be done at the first opportunity, if it be not till an opening of the ground sometime during Winter.

CLEAN UP THE GARDENS.

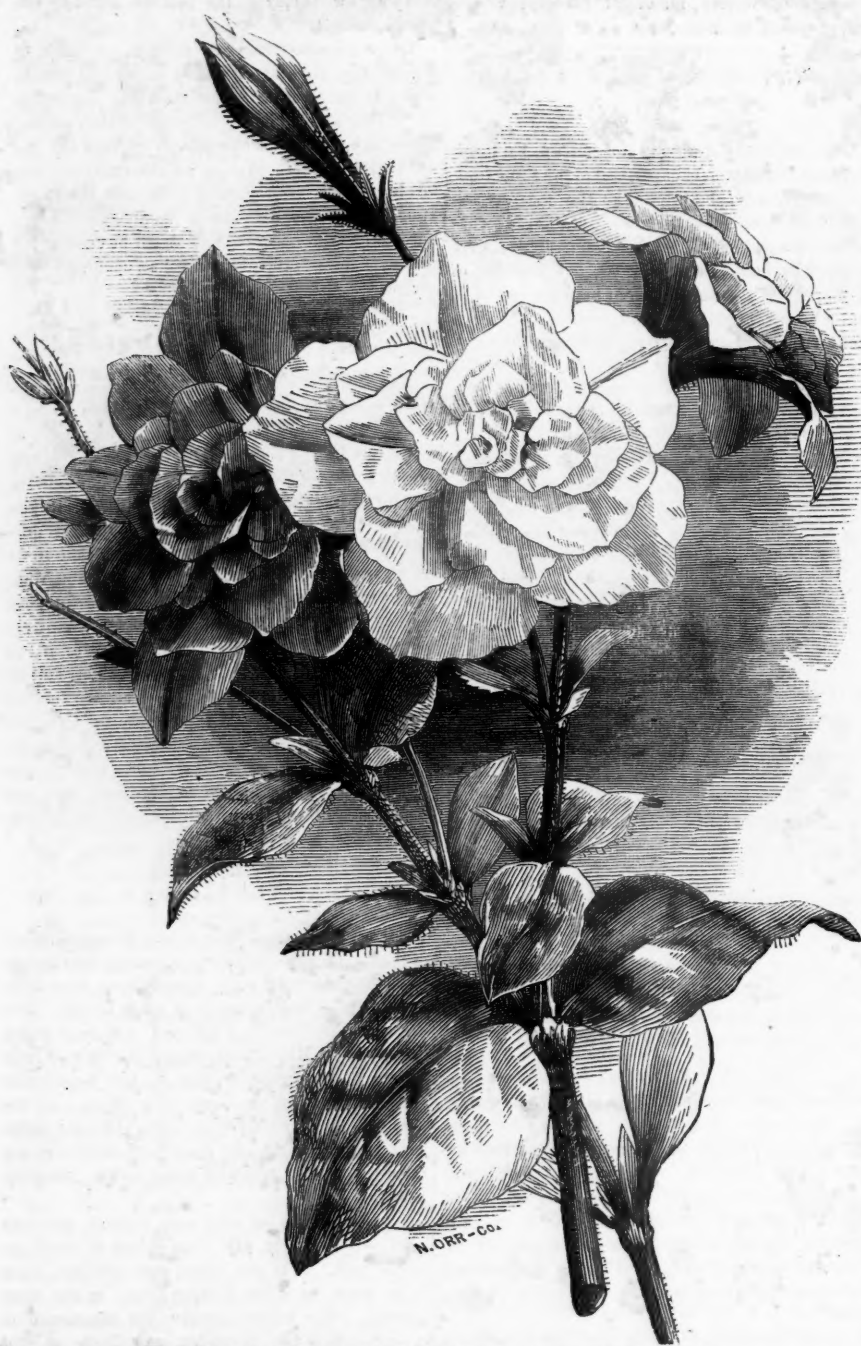
You may pride yourself—as we do—on showing a vegetable garden where there is not a single growing weed, but there will be any quantity of vines, stalks and rubbish from the various useful plants which will need to be gathered and piled in an out of the way, and out of sight heap, if you would not have an eye-sore to look out upon during all the Winter. It takes no more time to do this at the beginning than at the end of the Winter, and how much more neat and cheerful your garden plot and yard will appear, if raked entirely clean and smooth. It will be still better if, as we have elsewhere advised, the garden soil be thrown into uniform trenches, and all the rubbish buried beneath them. If by chance, or by negligence, any foul weeds have been permitted to go to seed, carefully gather and burn them. One weed stalk left to ripen on the ground, will add materially to the labors of the next and the following years.

DEUTZIAS.

This is an interesting and very beautiful family of plants, the different species coming into flower in succession from early Spring until after most other shrubs have completed their bloom. It is of "celestial" origin, the first specimen being brought from China, and named in honor of John Deutz, a distinguished botanist, and contributor to the expeditions to China and Japan. All the varieties thus far introduced here, like most plants from those countries, are found well adapted to our climate, proving perfectly hardy in the Northern States.

The Deutzia is of very easy culture, growing readily from layers, and from offsets or divisions of the root. It is also raised from cuttings, those from some varieties striking freely in the open ground, while others require the assistance of a cold-frame or green-house. Early in this month is a suitable time for transplanting the different species, and if this be done with care, they will bloom freely next Spring. The *Deutzia scabra* has been cultivated in this country for some years past, but what we now wish especially to recommend is the *Deutzia gracilis*, of recent introduction. As implied in its name, "gracilis," (graceful,) its branches shoot out into a slender delicate growth, covered in early Spring with a dense white bloom. The plant itself is of low growth, seldom reaching more than two feet in height, with small narrow leaves of a deep green, contrasting finely with its snow-white flowers. It forms a choice shrub for the open border, and is well adapted to Winter forcing in the hot-house, where it blooms in great profusion during the entire Winter.

The plants can be obtained at most nurseries for 37 or 50 cents each, and may be carried to any distance. Put them into almost any garden soil, and cultivate like the lilac and other flowering shrubs.



DOUBLE-FLOWERED PETUNIAS.

Most persons are familiar with single-flowered Petunias. Like the verbenas they produce beautiful flowers during the entire Summer. These are white, purple and crimson, with all the intermediate shades. They can be raised from the seed, but do not thus grow true to the parent plant, and layers or cuttings must be resorted to in order to propagate any choice variety. The best time for increasing them for Summer plants, is early in Spring, when slips of young half-hardened wood are to be set in pots supplied with equal parts of loam and white sand well mixed, first filling the pots half full of potsherds or coarse gravel to preserve a good drainage. A bell or other glass must be placed over the cuttings, and care be taken in watering and ventilation to prevent their damping off. A dozen or two may be set in one pot. In the fore part of May, or as soon as all danger of frost is past, transplant in the open ground and they will soon commence flowering.

The plants are tender and require Winter pro-

tection. In Autumn, any choice plant desired for propagation, should be taken up, partly trimmed down, potted, and kept in a green-house or warm room until Spring, by which time a new crop of shoots will be produced for putting out. They will grow well in almost any soil. So much for the single-flowered.

Last year, for the first time we believe, a new variety—a double-flowered petunia—was produced in France called the *Imperialis*. One of these was taken to England, and a batch of seedlings raised by Mr. Grieves, the first season, by hybridizing the *Imperialis* with the best varieties of single-flowered, the result being a number of beautiful varieties, distinct in form and color, the color going through all the shades of crimson, purple and white. The cut above, representing two of these varieties, we have had engraved for the *Agriculturist*, from an original drawing, appearing in a recent number of an English journal, "*The Field*." The *Imperialis* has been brought to

this country, and so rapidly has it been propagated that single plants are already sold by Florists as low as 25 cents each.

This new Petunia, the *Imperialis*, is one of the finest floral acquisitions we have had for some time, among plants adapted for bedding out in Summer; nor is it less valuable for pot culture, from its superior habit and prolific flowering qualities. The flower is a pure white, perfectly double, stands clear of the foliage, and is very fragrant; and, unlike the single varieties, will be very useful for bouquets, as it does not soon wilt after cutting. The habit of the plant is very robust, vigorous, and much more compact than the single-flowered. It appears to grow and flower abundantly in ordinary garden soil, and we hope soon to have double flowers of all the varieties of colors common to the Petunia, introduced and offered for sale here.

There are a number of new varieties of the single sorts, some very beautiful, from the richness and novelty of their colors. One of these recently brought out in Baltimore, Md., and raised by a gentleman of that city, is very striking. It is of a purplish crimson color, with a broad band of green around the edge of the petal nearly half its depth. The green color is very rich and velvety in appearance, and forms a fine contrast. This is a very desirable sort. It is named "*Domicilia*," and will be for sale in the Spring of '58. It is rather delicate in habit.

THE NEW BLACKBERRY NAMED AT LAST.

Considerable discussion has been had respecting the name of the Blackberry originating at New-Rochelle, and we have been blamed for persistently calling it the "*New-Rochelle*" instead of the "*Lawton*," as named by the New-York Farmers' Club, whose authority to do so we did not, under the circumstances, admit. We have, in all cases, agreed to adopt any name that should be fixed by any respectable horticultural society having due authority to name new plants or fruits. In the proceedings of the Fruit Grower's Association of Western New-York, at their Rochester meeting, Sept. 18th and 19th, we find the following:

"C. B. Bissell stated that several persons in his neighborhood had abandoned the Dorchester Blackberry, from its unproductiveness. Mr. Downing being called upon to give the Convention the benefit of his experience with this fruit, stated that the New-Rochelle or Lawton was the largest and bore the best crops, the Dorchester was sweeter and of better flavor, but not so productive, and the Newman Blackberry was sweeter than either, but not very productive.

On motion of Joseph Frost, it was resolved, unanimously, that hereafter the New-Rochelle or Lawton, be designated as the New-Rochelle.

ONE OF DR. HALL'S SAYINGS.—In the N. Y. Journal of Health for October, '57, Dr. Hall, the editor, says: "*The American Agriculturist*—\$1 a year—gives a larger amount of seasonable, reliable agricultural information than any similar publication in the country." This is high authority, and the statement may be considered a truism, since it appears to be the universal sentiment, as well as expression, of the entire press of the country.

CURIOUS BUT INSTRUCTIVE EPITAPH.—In a New-Jersey grave-yard there is a plain stone erected over the grave of a beautiful young lady, with only this inscription upon it: "*Julia Adams, died of thin shoes, April 17, 1839, aged 19.*"

Which is the oldest berry!—The elder-berry.

IN DOOR WORK.

Under this head we intend very soon to devote considerable space as well as attention to giving sound, practical instruction—not merely stale “recipes” passed along from journal to journal, year after year. The truth is, there are many important scientific principles directly applicable to the every day work of the kitchen and other domestic labors, and we have long desired to set before our readers, in plain, simple, easily understood language some of these principles. But it requires more time and thought to do this than to merely discuss general principles in the language of science, and we have been so constantly over-pressed with our editorial and publishing duties, that we have found no time to treat the subject as we have desired. But we fully intend to take hold of the matter in earnest during our next volume, and we promise our lady readers that their special department will be much more *instructive* if not more interesting than hitherto. For example, we say that in boiling fresh meats they should be put, not into cold but directly in hot water, except when designed solely for broths, in which case they should stand for a long time in cold or tepid water. Now there are plain chemical reasons for these directions, and there are similar reasons for a hundred other household operations, which may, we think, be made perfectly plain and comprehensible to those unlearned in the mysteries of science, and to the explanation and application of these principles we propose to devote a portion of these pages. For a month or two, however, we are compelled to defer entering so fully and systematically upon these topics as we shall do afterwards, and so we now only note down a few practical directions gathered from our own observations, and from the letters of correspondents.

SELECTING FURNITURE, ARRANGING ROOMS, &c.

To the Lady Readers of the American Agriculturist.

The cultivation of taste in household arrangements is a matter of no little consequence. Its moral influence is not small. It preserves the young from many temptations to low enjoyments, and renders home an attractive spot. Good taste may show itself quite as readily in a log cottage as in a fifth-avenue palace, and be equally attractive. I remember no dwellings with more pleasure than some of the vine-covered log houses of the West, and a very simple little cottage in New-Jersey, almost hidden in the loving embrace of roses, honeysuckles and grape vines. It does not require wealth to create home beauty. Refinement and delicacy of taste can invest the rudest home with charms that money alone could never furnish.

“Our yard is the prettiest yard in the block,” I heard some city boys exclaim, a few weeks since. “We have been on the roof of the house and have looked at every one.”

What was it that made that yard more attractive than the others? They were all fenced and painted alike, and differed only in what had been done in them a few hours in early Spring, and in a few minutes attention, now and then, through the Summer. In the “prettiest yard,” the brown, close-board fence was covered with scarlet-runners, morning-glories, maderia-vines, and a wide-spreading grape-vine, and the borders were bright with verbenas, and a few “dear common flowers.” The taste of these boys had been cultivated, and they had learned to appreciate what many others

might not have noticed, and their home-happiness, and home-love had been increased by the simplest and most natural means. The influence of those few flowers and of the green, living drapery on the fence will never be lost. It will modify the whole life, and give a delicacy and a love of the beautiful that will grace their manhood as the vine graces the oak.

I have often been impressed with the wonderful sameness with which houses are furnished, as if, instead of consulting our individual wants and taste, we consulted the opinions and taste of others. A sofa of hair-cloth, and six mahogany chairs in black, seems to be considered almost essential where more showy and expensive furniture is not used, and then there must be a table with a marble top and a side-table or two, and a rocking chair, and these are too often arranged with mathematical precision against the walls, so as to destroy all idea of comfort and ease. Hair-cloth furniture, well made, is serviceable, but it is very sombre. A room furnished with it, unless relieved by bright colors in carpets and curtains, has a funeral look that is anything but cheerful. I much prefer cane, or rush seated chairs of prettier style. They are lighter to move, and more comfortable for use, than most stuffed chairs. Small figured carpets should always be selected for small rooms, for those of large figures diminish, apparently, the size of the room. Arm-chairs are preferable to rocking chairs for the parlor, for rockers are almost always in the way, and often do much injury to other furniture and to the house itself.

Furniture should be so arranged as to indicate that it is designed for use, and not merely kept for show. It should have a social, friendly air, as if on good terms with its neighbors and not afraid to meet on terms of equality. Do not arrange books on a table as if they were paraded for military display, and ready to be marched around with measured step at just the same distance from the edge. Books, it is to be supposed, are to be read, and they should lie about carelessly as if they had just been put down by a reader. I have a nice girl who attends to my parlors, but she is so very nice and orderly in her arrangements that the first thing I do on entering the rooms is to draw away some of the chairs from the walls, to give a cricket a push with my foot, and to scatter various piles of books, and remove the fan and paper knife from the central figure of the table cover. Excessive order is an unusual defect in girls, and one much more easily remedied than the opposite. I have no disposition to complain, for it is but a moment's work to change the frigid air to one of warmth and comfort. Pictures should be hung low enough to be easily examined—about opposite the eye—Let the picture cord correspond with the leading color of the room, or contrast well with it. Do not mingle colors in furnishing a room; have the walls and carpet, and curtains and furniture harmonize. Let there be a leading color and everything in agreement with it. If the carpet is crimson, green wood-color, the curtains may be of either color, but put up blue drapery and the handsomest parlor would be ruined. We can learn much of the effect of colors by a study of nature.

Do not select one article very much handsomer than the others. A velvet carpet calls for corresponding expense in sofas chairs and tables, while a pretty ingrain of good colors looks well enough for any country or city house of moderate pretensions. It is well to furnish a house so much within one's means as not to be constantly afraid that this and that will wear out, and can never be replaced. It is far better to be able to use and enjoy what we have and permit our chil-

dren to use and enjoy it, than to shut up a part of the house for weddings, parties and funerals.

ANNA HOPE.

CHAPTERS ON COOKING, &c.

Continued from page 210.

COOKING MEATS.

On this topic we shall continue to have much to say, so long as one half or more of all the meat used in the country is deprived of a great portion of its nutriment by cooking it wrongly. Without stopping now to give the reason, we say that all frying of meats is bad—decidedly bad. So of potatoes and other articles fried in fat. These substances are indigestible, and worse than innutritious. Broiling, roasting and baking, if not carried too far, are perhaps the best modes of cooking fresh meats of all kinds, and most kinds of fish. The difference in the taste, digestibility and nutritive value of a piece of beef-steak quickly broiled over a lively bed of coals, and the same piece fried in fat, can hardly be appreciated by those who have only practiced the frying mode, and this includes three-fourths of all the families in the country. If some one of our female contributors will give us a chapter of full details on broiling meats we shall be glad to publish it, otherwise we will try our hand at it, for there is much to be said on this topic. Reader, do you spoil fresh fish by frying it in lard, or preserve its flavor and sweetness by cooking it on the grid iron?

Boiling Corned Beef.—This is a staple food in a majority of families during several months every year, and in most cases the cooking may be greatly improved. The two chief errors are, first in not cooking it long enough, and second, in losing a large proportion of its real nutriment. We always prefer it prepared as follows: Soak in warm, not hot water just long enough to take out all excess of salt. Then cover it so that the steam will condense upon the under side of the cover and fall back. This will prevent boiling away and also the loss of much of the nutriment which in an open vessel goes off with the steam. Boil the meat several hours or until it is so thoroughly done that it will not hold together to be lifted with a fork. If there be any bones take them out, since if cooked enough the meat will cleave from them readily. Pack the meat by itself in a deep dish, mixing well together the lean and fat portions. Next skim the fat and boil the liquor down so that when poured over the meat it will just fill the spaces between the pieces. Then lay over the whole a flat cover which will fit into the dish, put on a dozen or twenty pounds weight and let it stand until cold. Several flat-irons or a large stone will answer for the weight, or if convenient it may be set under a cheese press. Prepared in this way, the poorest piece of tough corned beef will be made tender and juicy. Boiling down and using the liquid, saves the most nutritious portion which is usually thrown away. The gelatine of the condensed gravy, when cold forms a solid mass with the meat, which may then be cut into slices for serving upon the table. If the fat and lean portions be mixed, when cut up cold the pieces will present a beautiful marbled appearance. Corned beef prepared in this way will not only be eaten with a superior relish, but it will not, on account of its toughness, be swallowed half masticated to produce irritation in the stomach, and yield only a portion of its substance as nutriment. Over the common process, there is only the extra trouble of the additional boiling and pressing, which are amply repaid by the saving of nutriment, while a cheaper quality of beef will be rendered wholesome

and profitable. Try this mode and you will not willingly go back to the hard boiled "inevitable salt junk."

Mutton cooked in the above manner is very nice.

DRYING PUMPKINS AND TOMATOES.

As fruit is scarce in many parts of the Country, every house-wife should lay in a good stock of dried pumpkins and tomatoes. Pumpkins may be put up in the old fashioned mode of cutting into rings, paring and drying upon poles; or they may be cut into small pieces, and dried on plates in the sun and oven. A better plan, however, is to pare, stew and strain them, just as if for pies; then spread the pulp thinly upon earthen dishes, and dry quickly in a hot sun or a partially heated oven. If dried slowly there is danger of souring. Store in a dry room. Kept in this manner they retain much of the freshness and flavor of newly gathered fruit. The dried pulp should be soaked in milk for a few hours before using. In making pies they are greatly improved by stirring the pumpkin into scalding milk, especially if eggs be not used. Tomatoes may be kept in excellent condition by cooking, straining and drying just as described for pumpkins.

PICKLING CABBAGE.

We have used an excellent pickled cabbage, kept in perfect condition for half a year at a time, which was prepared thus: Slice the heads very finely. A head of red cabbage mixed with half a dozen white ones giving the whole a pretty color. Sprinkle on and mix in a little salt. Scald together, say one gallon of good vinegar, two or three tablespoonfuls of sugar, one tablespoonful of cloves, one of ground cinnamon, and a teaspoonful or less of ground black pepper. The cloves, cinnamon and pepper should be put into a bag while scalding. When cold pour the pickle over the cabbage, and also drop in the bag of spices. Keep the whole well covered, putting a plate over the cabbage to hold it down in the pickle.

SALTING DOWN LIMA BEANS.

A correspondent says that Lima Beans may be preserved a long time by gathering the pods when they begin to turn yellow, and packing them in kegs with alternate layers of salt. We imagine they would not be very good after this salting process. Perhaps the salt would not strike through the pods to injure the beans themselves. We have always kept them, by picking as soon as they can be shelled, and drying before fully ripe.

READY MADE YEAST.

Perhaps all our lady readers may not understand the best method of having good ready made yeast always at hand. We invariably have good bread made from yeast cakes prepared as follows: Put into three pints of water a handful of hops and nearly a quart of pared potatoes cut into small pieces. Boil for half an hour, and strain while scalding hot into sufficient flour to make a stiff batter. Stir it well, adding one tablespoonful of fresh yeast, and set into a warm place to rise. When light mix it stiff with Indian meal, roll out thin and cut into round cakes or square pieces 2 to 2½ inches in diameter. Dry these thoroughly and keep them in a bag in a dry place. They will remain good for months. Before using take one of these cakes for each medium sized loaf, soak in warm water till soft and add a teaspoonful of soda for three or four yeast cakes. Add this to the flour with warm water, and raise in the usual manner. Some put the light yeast without adding the Indian meal, into close jars or jugs, and use as needed. It will not keep many weeks by this method.

RHODE ISLAND PANCAKES.

Sometime since, D. Salter sent us the following, indorsed as very good; we should hardly call them pancakes: "To one pint of Indian meal and one pint of rye flour, two tablespoonfuls of molasses, 1 tea-spoonful of salt, 1 of saleratus, and 3 eggs, well beaten. Stir with these new milk enough to make a stiff batter, and fry 10 minutes in lard, like doughnuts. When milk and eggs are scarce, we think the following is nearly as good: Mix well 1 quart of Indian meal, 1 quart of rye flour, 2 large table-spoonfuls of melted shortening, 5 table-spoonfuls of molasses, 1 table-spoonful of salt, a scant tea-spoonful of saleratus, and 1 quart of water. Fry as above.

TO COOK CAULIFLOWERS.

To the queries of A. M. Daniels, of Tioga Co., N. Y., and Jane M. Richards, of Iowa, we reply, that we have them cooked similarly to common cabbages, thus: Remove the leaves and tie the head or flower in a cloth, or cabbage bag, and boil in water until soft, which will require 1½ to 2 hours. Then remove from the kettle, press out the water, and serve a sweet cream gravy, or with drawn butter, that is butter melted in hot water and thickened with flour.

PICKLED BOILED CABBAGE.

Mrs. M. A. H. Rowe, of East Chatham, sends the following mode of pickling cabbages, which is indorsed by a good judge of our acquaintance: Look over the heads and wash them thoroughly. Cut into quarters and boil until tender. Then put down in layers in a tub, sprinkling upon each layer, salt, allspice and ground cinnamon, using 2 ounces of salt, and 1 ounce each of allspice and cinnamon, to 8 quarts of cabbage. When put down cover with vinegar. The boiling before pickling we think a decided improvement upon the common method of putting them down uncooked.

APPLE DUMPLINGS.

An old schoolmate, Mrs. E. M. Chalker, sends us, from Michigan, the following: Mix well together one well-beaten egg, one pint of good buttermilk, one tea-spoonful of salt and one of saleratus, with flour enough to make a stiff batter. Into well-buttered tea-cups drop half a table-spoonful of the batter, and set into each cup an apple pared, quartered and cored, with the quarters put together again. Now cover the apples with batter and set the tea-cups into a steamer over boiling water. Cook one hour. This appears to be a good recipe, and we shall have it tried.

FRITTERS.

Mrs. Chalker also recommends the following: Beat well together one egg and two table-spoonfuls of sugar. Add one tea-cup full of sweet milk, one tea-spoonful of soda, and flour enough to make the batter. Salt and nutmeg to suit the taste. Fry as soon as possible after mixing.

PICKLING AND KEEPING HAMS.

John Clackson, of Pike Co., Pa., recommends the following method. Lay them down in a preparation of seven pounds of salt, mixed with half pound of coarse sugar, one pint of molasses, and half ounce of saltpeter. Let them remain 4 to 8 weeks, according to their size, then drain, put into a paper bag and hang for a month in a chimney where a coal fire is kept. Pack away in barrels, with malt screenings enough between to keep them from touching each other. The other plan described by Mr. C. is not practicable, as the "essence of smoke" is a very variable article and cannot be relied on.

ABOUT FLIES.

E. Y. B., of Meriden, Conn, writes: I believe

there is no loyal road to the extermination of flies, which "Country Housekeeper" inquires after in the October *Agriculturist*, page 238; nor can they well be "destroyed in the egg," but the eggs may be in a great measure prevented. Let the same neatness exist in the surroundings of the dwelling, which is considered necessary to comfort within it, and there will be few flies to annoy one. And as a matter of economy this should be attended to, for, while guano is \$60 a ton and more, no one can afford the wasted ammonia to breed and feed a hundred flies. Keep the contents of the yard composted, the sty well "mulched;" all other out-buildings deodorized, have a cistern for all sink water, look well to the melon rinds, and other debris of that sort, and this fly nuisance will be greatly abated. Remember, he is pursuing a bad system of farming who raises many flies.

HOME-MADE CORN STARCH.

In answer to our Kansas subscriber's inquiries, A. B. Price, of Boone-Grove, Porter County, Ind., sends the following to the *Agriculturist*: Take the ears when full of milk, grate fine into water, in a tub; strain off the husk, &c., through flannel; let the strained water stand all night, then pour it off, or strain it off if necessary; add more and clean water to the starch, with a little indigo to suit taste; let it stand about half a day, then decant off the water, and dry in the sun as soon as possible. We make all our starch in this way, and we think it worth twice as much as any we can buy.

REMARKS.—This will do well for using unripe corn; the sample sent to us is apparently very good. But a simple, cheap process for using dry ripe corn is desirable, for some of the remote settlers in frontier towns, where, from the difficulty of getting articles to or from market it is necessary to manufacture every article possible. Starch, however, is not one of the "necessities" in such localities.

Our Kentucky Correspondent "Mrs. C. H. P." contributes the following four recipes:

TO MAKE STARCH IN QUANTITY.

Take a bucket full of wheat, and put it in a barrel with 2 or 3 buckets full of warm water; set it in the sun or a warm place, till it gets a little soft, then pour off the water. With a maul pound and mash the grains as much as you can then add more warm water, or let it set till it ferments, pounding it often, till the bran comes off; then rub it through a colander and sieve; wash and strain it through flannel-cloth—blue it, pour off the top for starch for calicoes, and you will have a large quantity of nice starch settle at the bottom.

GREEN TOMATO CATSUP.

Slice large green tomatoes, salt them as for the table; boil them 20 minutes in vinegar and water in which there has been put a pound of sugar; take them out and put a layer of tomatoes, then pepper, spices, horse-radishes, mustard, onions, &c., to please your fancy—then pour on cold strong vinegar to cover them, then put another layer of tomatoes, spices, vinegar, &c., till the jar is full—it is now fit to use.

TO DYE A BRIGHT AND LASTING YELLOW

Simmer your hanks of yarn in strong alum water; then put a layer of peach tree leaves in a tub, then a layer of yarn, then leaves, till all are in; then pour over them the boiling hot alum water to cover them; let it set all night; wring out and air it; then heat the dye and put in fresh leaves with the same yarn, in layers, and pour over the hot dye for several days, wring it each day till you get it the shade you like. Set it with

strong suds. This makes a fast color that grows brighter by washing in strong suds.

TO SCOUR MERINO WOOL.

Have ready two strong hot suds, and wash the wool quickly through them by drawing the wool through your hands, as you do a hank of yarn without rubbing; wring dry; hang on a line and it will not be matted. Put no soap on the wool; keep the suds hot. It is cold suds and rubbing soap on that fulls flannel and wool.

NOTES UPON VALUABLE BOOKS.

[Furnishing Books.]—Though Book selling is no part of our business, yet to accommodate distant subscribers or those not having access to regular book-sellers, we will at any time be happy to procure any book desired by a subscriber, and forward it, *post-paid*, on receiving the retail price, as publishers usually allow us discount enough to cover the cost of mailing.

A Valuable New Work.

CLIMATOLOGY OF THE UNITED STATES, and of the Temperate Latitudes of the North American Continent, embracing a full comparison of these with the Climatology of the Temperate Latitudes of Europe and Asia, and especially in regard to AGRICULTURE, Sanitary Investigations and Engineering, with Isothermal and Rain Charts, for each season, the extreme months, and the year, including a Summary of the Statistics of Meteorological Observations in the United States, condensed from recent Scientific and Official Publications; by LORIN BLODGET. Philadelphia: J. B. LIPPINCOTT & Co. Price \$5.

We have copied the above title page to give our readers an idea of the comprehensive and valuable character of a work to which we would direct their special attention. It would be impracticable, in this place, to review the work at large. Suffice it to say that the analysis above, gives but a limited view of the great amount of useful information afforded. Full statistics of the temperature at all seasons, of the quantity of rain and snow falling, of the prevailing winds, of the range of staple crops, &c., &c., are given for almost every prominent point in the United States and Territories. A dozen or more colored charts, bring at once before the eye, the comparative amount of rain, range of temperature, &c. Half-a-dozen inferior books, costing a dollar each may well give place to this in the library. We shall refer to this work hereafter, and draw from its pages much useful information relating directly to the specific topics discussed in this journal.

Fruit Books—Central Park of N. Y. City.

FRUIT AND FRUIT TREES OF AMERICA, of the culture, propagation and management, in the Garden and Orchard, of Fruit Trees generally; with descriptions of all the finest varieties of Fruits, Native and Foreign, cultivated in this Country. By A. J. DOWNING, Revised, corrected and enlarged by CHARLES DOWNING. New-York, WILEY & HALSTEAD: 760 pages; Price, \$1.50.

Fruit books are becoming "as plenty as blackberries." Each Nurseryman naturally desires to make his name famous, to see himself in print, and thus to sell his trees to his customers, and his fame to posterity. And indeed many of these evince much talent, for we have always thought it more difficult to compile than to write originally, to gather the relics of all, and accept the blunders of none, to translate the best French books on training, and the best Chinese on dwarfing, only with becoming modesty, not acquainting the public that you are able to read any other language than your own. We do not wish to place these compilations in oblivion, but we are glad they were published before the book under notice came out, on the principle of the consoling remark made by an old gentleman to a damsel who was sobbing bitterly over the marriage of a favorite sister,

"Not lost, my dear, but gone before."

The field is now clear and this really good work will be appreciated. Last Spring, in writing a notice of one of the above mentioned fruit books, we remarked incidentally that "if Charles Downing, who has more pomological knowledge, and more modesty, than belongs to most fruit men, could be induced to bring his brother's book, about down to the present time, we should probably have all that we specially need now on this subject." We did not then know that he was employed upon it but threw out the idea as a suggestion and were agreeably surprised to receive this book from the publishers.

Since the death of the lamented author, the general estimate of many varieties of fruit has materially changed, as time has more thoroughly tested them. In these, this work has been thoroughly revised. Synonyms have also been ascertained, and disputed varieties identified. Some varieties which have proved poor have been placed in an inferior list, and others which have proved worthless have been rejected entirely. This book is therefore in our opinion, the very best work on fruits that

we have, and for the Eastern and Middle States, will doubtless be considered an authority which the multitude of other works can not claim.

We are glad to notice the following remark on fruit nomenclature. "Order and accuracy can only be arrived at when the different varieties are well grown in the same soil and locality, which can only be realized in an experimental garden on a large scale." It would be a great boon to the country, if such a garden could be established by any corporation having the means to do it properly. The Central Park Commissioners of this city, have it in their power to do this by devoting a number of acres to the purpose and placing it under the charge of a man like Charles Downing. New-York is already the Metropolis of America, it will soon be the Metropolis and moneyed center of the world. Would it not then, years hence, be an object of great interest to the travellers who for business or pleasure, or instruction will throng our thoroughfares and say to each other that, beyond all the theaters and palaces of trade and private mansions, and galleries of art, is that Central Park of more than 700 acres, where may be seen all the trees and fruits which are known in every temperate climate in the world. Notes made by a man like Chas. Downing in such an establishment would be accepted by the world as authority, and an aid thus given to the cultivators of good fruit which the Central Park Commissioners can scarcely realize until the result is before them. Let us then, by all means have a Pomological garden in the Central Park.

McMAHON'S AMERICAN GARDENER'S CALENDAR, adapted to the climate and Seasons of the United States; containing a complete account of all the work necessary to be done in the Kitchen Garden, Fruit Garden, Flower Garden, Orchard, Pleasure Ground, Vineyard, Nursery, Green-House, Out-House and Forcing Frames, for every month in the year, with practical directions and a copious index, by BERNARD McMAHON. Eleventh Edition, with a memoir of the author; revised and illustrated under supervision of J. JAY SMITH. Philadelphia. J. B. LIPPINCOTT & Co.—637 pages. Price \$2.00.

We scarcely need refer to this old standard work further than to say that a new edition materially improved has just been issued. It is the best work of the kind in the country, and can hardly be dispensed with by those interested in the practical operations of gardening.

OUR BASKET

Into which are thrown all sorts of paragraphs—such as NOTES AND REPLIES TO CORRESPONDENTS, with Useful or Interesting Extracts from their Letters, together with Gleanings of various kinds from various sources.

TO CORRESPONDENTS—Notwithstanding our increased space, the basket is unintentionally crowded into small compass this month. A multitude of notes, extracts, etc., are waiting room here and elsewhere. Among these are letters from Mrs. L. A. M., Iowa; Mrs. P. E. G., Pa.; D. C., Md.; F. R., N. C.; W. H. M., Pa.; S. A. B., Ohio; D. B., P. M., Pa.; E. S. J., N. Y.; and others.

Apples—Rotting.—W. B. Morgan, of Gibson Co., Tenn., will probably find upon examination, that most of his apples which rotted prematurely upon the tree, were preyed upon by insects. The best preventive will be a removal of the cause by cooking all diseased fruit to destroy what worms are left, examining and scraping off the rough bark of the tree, crushing or burning every web or cocoon containing the embryo parent of a future crop of worms. For fuller directions, see pages 135 and 170, of the June and August *Agriculturist*.

Mice vs. Trees.—Jas. Noakes, of Onondaga Co., N. Y., recommends the following plan to keep mice from gnawing trees, which he has practiced in England, with success. Get the common tea-chest lead, which can be bought for a trifle at the grocery stores, and cut into strips 10 inches wide, and long enough to go around the tree. Dig away the earth around the trunk an inch deep, put around the lead and return the earth. There is no need of tying, and the lead sheets can be taken up in the Spring and kept for subsequent years.

Sugar Cane Seed—Thresher.—A correspondent furnishes the following description of a simple hand machine for threshing a small quantity of sugar cane seed: "Make it on the principle of the common grain thresher. Let the cylinder be of slats of moderately hard wood, one-and-a-half inches thick and six inches wide. Through these strips drive strong nails or spikes so that when they are fastened to end pieces in the form of a drum these spikes projecting through the outer surface shall form the teeth of the machine. This cylinder may be two feet long and eighteen inches in diameter, revolving upon a central rod of iron or wood. Prepare a similar circular bed for it to work in, arranging the teeth with reference to those of the cylinder. By attaching a band to wheels or pulleys made with reference to getting a rapid motion on the drum and attaching a pin or crank to the smaller pulley. The whole being fitted in

a simple frame, you have a cheap machine that will take out the seed much faster than a hetchel arrangement."—We suspect such a machine would break the tender seeds, unless the nails fitted pretty evenly and were rounded at the corners. An old fashioned flax or broom-corn "hetchel" is, perhaps, the best thing after all. See one described on page 57 of this volume, March number.

Saw-Dust.—D. Heston, Cecil Co., Md. If you have an abundance of muck, it will doubtless be good economy to save all the saw-dust possible and mix it with yard manures. It is not so good a fertilizer as muck, as it contains less nitrogenous matters, but is a good absorbent, besides furnishing a little nutriment. No saw-dust should be allowed to run from the mill-tail. If not wanted in the stables and manure heaps, as it usually is, it should be carefully saved as a mulch around fruit trees, on strawberry beds, &c. It is not possible to make a direct comparison of saw-dust, bulk for bulk, with other manures.

Italian Rye-Grass.—G. C. Lyman, Susquehanna Co., Pa. This grass, which yields such large crops under Mr. Mechi's high cultivation, is fast gaining favor in this country. A seedsman in this city has contracted for 100 bushels, to arrive in season for Spring sowing, showing a demand for it. It is a tall, quick-growing, perennial grass, seeding itself at the time of harvest. When fed off it starts rapidly, and grows till late in the Fall. One or two years will thoroughly test its adaptation to our climate.

Early Potatoes.—Geo. W. Robinson, Onondaga Co., N. Y. Your inquiry for the best variety under all circumstances, can not be answered directly, since a variety the best in one place may not be so in another. You will find the Long-Islanders' experience on page 253 of this number. There are many new varieties or seedlings constantly coming before the public, few of which prove good. In our own experience during the past two Summers, the Prince Alberts have excelled most if not all others. See page 102 of this volume, May No. We can judge better when this year's crop is gathered. If they meet our expectations we shall distribute all we have among our subscribers free, sending a peck or so, to be distributed at each of those points where our largest clubs are located.

Flowering Bulbs.—Several ladies inquire where these can be obtained. They will find them in most seed stores we believe. Mr. Bridgeman advertises a fine assortment. See page 270.

American Institute Exhibition.

This is in full tide at the Crystal Palace. The display of articles of interest to all is much larger and better arranged than we have ever seen exhibited before this association. A day or two, or three, at the Crystal Palace can be passed now with great profit by every one who can possibly get there.

FOR THE BOYS AND GIRLS ONLY.

For the American Agriculturist.

Where is New-England?

I once had occasion to purchase some wall paper for friends in New-England. They sent for a particular style, which I ordered as directed, but which when received by them proved to be of two different shades of color. A year or two afterwards I selected some at the same place for our own pleasant country home. The store where I made these purchases does both a wholesale and retail business. After I had decided upon a pattern that suited me, I said to the salesman, "Be careful that you put up all the rolls of the same shade. I once purchased paper here for friends in New-England, and it was of so different shades that it could not be used for the purpose for which it was bought."

"New-England, New-England," said he inquiringly, "Where is that place? I never heard of it before."

I was so astonished that instead of attempting to tell him where New-England is, I merely said, "It was sent to New-Hampshire."

"I believe I have heard of that place," he replied, in half-doubting tones.

I was certainly surprised to find such ignorance in a wholesale store in New-York, and especially in an individual whom from various circumstances I supposed to be a member of the firm. I can not by any means conclude that such instances are common, but I doubt whether there is any boy or girl who reads the *Agriculturist* who would have asked the same question, or confessed similar ignorance.

The season for field labor on the farm is almost over and boys have leisure for study. The Winter months are golden months, in the farm house, for then particularly is the time for mental improvement, and for laying up treasures in the intellectual store-house, which shall last long after those in the granary have been consumed.

Industry in the Summer, with God's blessing, brings

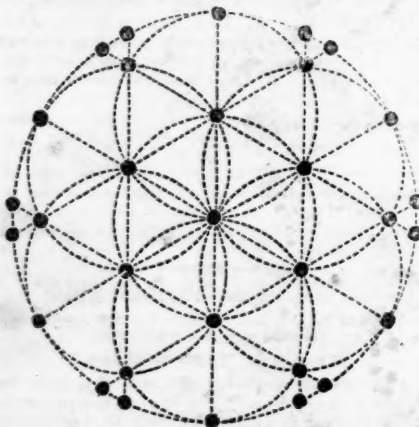
competence and comfort for Winter—so industry in childhood, in the cultivation of the mind and heart, brings with it self respect, mental stores, and influence, and respectability in manhood. We are often told that childhood is the seed-time of life, and no one can better appreciate this idea than those who know practically how important it is that seed should be cast into the earth in its appropriate season. The wise man tells us that "an idle soul shall suffer hunger," and that "the sluggard who will not plow by reason of the cold, shall beg in harvest, and have nothing." There is a hunger of the mind more fearful than that of the body, and a poverty more terrible than that which results from a want of physical good. The body stunted in youth never attains its full proportions—it is always dwarfed—so the mind starved in early years always bears the mark of its deprivations. Remember this, children, and lay up for yourself treasures that wax not old, but which once yours are always yours. Improve the coming Winter months by diligent study. Learn to think, and to write, and to speak your thoughts. Lay a good foundation for your future life. Geography is one of the most interesting and useful of studies, and without thorough knowledge of it you can not read even the newspapers with advantage. Look out on the map, every place about which you read, and never consider it too much trouble to do so. Be not an intellectual sluggard. Remember that many of the wisest and greatest men of our country have been farmer's sons, and prepare yourselves to be an honor and a blessing to our beloved land. The Winter is pre-eminently your seed time. Let it not pass by unimproved. I should be sorry to think of any of you as one half as ignorant as the New-York salesmen.

ANNA HOPE.

ANSWERS TO PROBLEMS IN OCTOBER NUMBER.

The following is the report of all correct answers received up to October 17.

No. 11.—To plant 31 kinds of flowers, one of each kind, so as to have 18 varieties in one circle; 7 circles with 6 varieties in each, 6 straight rows with 6 varieties in each and 3 straight rows with 5 varieties in each.



As remarked last month, this will make a pretty flower bed if smaller plants are put where they come nearest together. No one has furnished a correct answer except the proposer, "Rusticus," of Corsica, Morrow Co., O. Master "Fourteen," of Auburn, N. H., sent one almost like it, and equally as pretty, which we have put aside for using at some future time.

No. 12.—By Serenus Raesly, Northampton Co., Pa. There are two equal circles, each containing an area of 1963½ square feet. The centers of these circles are 30 feet apart. What will be the cost of paving with pebbles the space between them; that is the space, enclosed by two lines drawn to touch the outside of the two circles not including any of the ground in the circles themselves; the cost of the paving to be reckoned at 4½ cents per square yard?

A useful problem, but no answer received yet.

No. 13.—Suppose all the gold obtained from both California and Australia, to amount to \$500,000,000, how large a box would it take to put it all into, supposing gold to be worth \$16 per avoirdupois ounce, and reckoning it to be 19½ times heavier than the same bulk of water. A solid or cubic foot of water weighs 62½ pounds. The length, breadth and height of the box to be equal.

Several answers to this were received, but only one, from Joseph H. Simpson, Arispe, Ill., is correct. John Miller, of Harmony, N. J., gave the required number of solid feet, but not the size of the cubic box. As the working of this problem will furnish a very useful arithmetical exercise for boys and girls, we will not give the correct answer now, but leave it a month or two for others to practice

upon, as many—all we hope—are engaged in studying arithmetic in the Winter school. It would only require a very small house to hold all the gold in the country if melted into a solid mass.

No. 14.—11 trees in 11 rows, with 3 trees in each row.

We are surprised at receiving eight solutions of this problem, all different and yet all correct. We could only engrave the first two received.

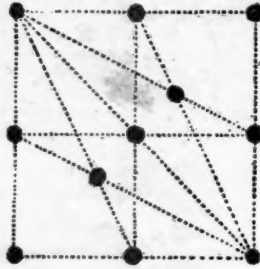
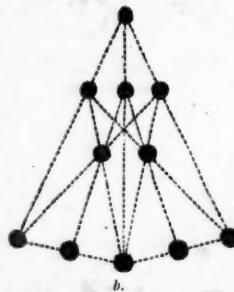
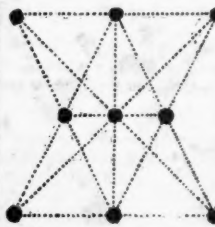


Fig. a was contributed by Chas. M. Foulke, of Bucks County, Pa.

Fig. b, by J. Rankin, Albany, N. Y. The other correct figures were sent by "Fourteen," of N. H.; A. M. Daniels, Tioga Co., N. Y.; Francis M. Vancil, Macoupin Co., Ill.; Susan C. and Roswell D. Gould, LaSalle Co., Ill.; Joseph H. Simpson; Charles Lumkin jr., Seneca Co., Ohio; Serenus Raesly, Northampton Co., Pa.; Samuel Ring, Ring's Mills, O.; Jno. Miller, Harmony, N. J.



No. 15.—9 trees, 10 rows with 3 in each row.



Miller, N. J.

No. 16.—To plant 15 trees in 16 rows, with 3 trees in each row, and also to have 2 rows with 4 trees each, and 1 of 7 trees.

The printers spoiled this problem on page 234 by putting 2 in place of the last 1 in the last line. We repeat it, and will wait for more answers before giving an engraving.

No. 17.—To fill 64 squares, 8 each way, with the figures 1 to 64 so that each column should add up 260.

1	2	3	4	5	6	7	8
16	15	14	13	12	11	10	9
17	18	19	20	21	22	23	24
32	31	30	29	28	27	26	25
33	34	35	36	37	38	39	40
48	47	46	45	44	43	42	41
49	50	51	52	53	54	55	56
64	63	62	61	60	59	58	57
260	260	260	260	260	260	260	260

Answered by Arthur M. Daniels, N. Y.; H. B. Hoffman, N. J.; Serenus Raesly, Pa.; "John of Center." See new problem, No. 19.

No. 18.—How much wheat shall I carry to mill in order to bring back 10 bushels after being tolled one-tenth?

Ans.—Eleven and one-ninth bushels. Answered by J. Miller, N. J.; Alfred H. Brown, Worcester Co., Mass.;

Joseph H. Simpson, Ill.; Arthur M. Daniels, N. Y.; John of Centre; Stephen J. Burton, Rensselaer Co., N. Y.; R. Doyle, Two Rivers, Wis.

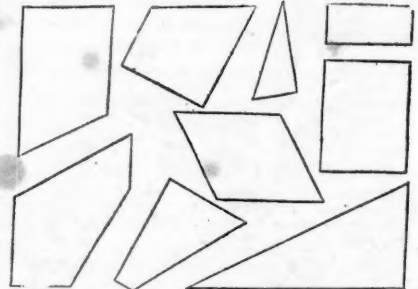
Additional answers to Problems 7, 8 and 9, have been received from Edna J. Kellogg, Oswego Co., N. Y. (No. 7); Jas. R. Dowling, Marietta Co., O. (Nos. 7, 8 and 9); P. H. Baker and D. Sturges, Mich. (No. 7); and George H., La Feta, Oakland, Ohio (the drawings of the trees and especially of the weights well done).

NEW PROBLEMS TO BE SOLVED.

Note particularly Problems 12, 13 and 16, still open for answers.

PROB. 20.—R. Doyle and Adria Annah Oliver, arranged the figures in the squares of No. 17, so that they add 260 both up and down and across. Who else can do the same?

PROB. 21.—To arrange the pieces in the following figure, so that when set close together they shall form a perfect square.



Send a drawing of this figure, and also one of the square with the pieces properly arranged in it. This is a new puzzle. To solve it, make a larger drawing like the one here given, on a piece of paste-board or on a card, then cut it up into the blocks indicated by the lines, and arrange the pieces so as to form a solid square.

The Garland of Wild Flowers.

Here is a beautiful gem which we find in Chambers' Edinburgh Journal.

These be simple flowers, lady, that I have culled for you;

For in no lordly garden or gay parterre they grow;

But on the dewy field-bank, where the poorest child may roam;

And fill its lap with treasures, to bear exulting home.

Any little country maiden can call you these by name;

I can not bring you rarer, since no foot of ground I claim;

But wide and rich is the domain I share with millions more;

Old England's meads and cornfields the gardens of her poor.

For while man sows "the staff of life," unseen a higher hand

Is strewing gems of beauty to gladden all the land.

The farmer calls them worthless weeds; but He sends sun

and rain,

Till many hued they blossom amongst the golden grain.

So do not scorn them, lady, these humble, God-sown flowers—

Oh! they were lovely once to you in childhood's guileless

hours—

So rather humbly join in praise to Him who thus has given

Torich and poor alike, a boon of beauty straight from Heaven.

Who Stole the Bird's Nest?

BY MRS. L. M. CHILDS.

The following lines have we hope been read and felt by every boy in the country, but lest even one boy has failed to see them, and also because they are pretty enough to bear even a hundredth perusal, we make room for them here, omitting the repetition of the question before each answer, originally written.—Ed.]

To whiff! to whiff! to whee!
Will you listen to me?
Who stole four eggs I laid
And the nice nest I made?

Cluck, cluck, aid the hen.

Don't ask me again.

Why I haven't a chick

Would do such a trick.

We all gave her a feather,

And she wove them together;

I'd scorn to intrude

On her and her brood.

Bob-a-link! Bob-a-link!
Now what do you think?
Who stole a nest away
From the plum tree to-day?

Chirr-a-whirr! Chirr-a-whirr!

We'll make a great stir!

Let us find out his name,

And cry for shame.

Not I, said the cow, moo-oo!
Such a thing I'd never do,
I gave you a wisp of hay,
And did not take your nest away.

I would not rob a bird,

Said little Mary Green;

I think I never heard

Of anything so mean.

Not I, said the cow, moo-oo!
Such a thing I'd never do,
I gave you a wisp of hay,
And did not take your nest away.

Not I, said the sheep, oh, no,
I wouldn't treat a bird so;
I gave the wool the nest to line,
But the nest was none of mine.

A little boy hung down his head

And went and hid behind the

bed;

For he stole that pretty nest

From poor little yellow breast;

And he felt so full of shame,

He didn't like to tell his name.

Condensed Reports of Experiments with the Chinese Sugar Cane.

Name of Experimenter.	State.	County.	Latitude	Soil.	Manure.	Planted at about	Headed out about	Height at time of heading.	About the time of ripening.	Height at time of ripening.	Diameter of foot of ground.
1. Wm. Wanzer.	Conn.	Litchfield.	41° 43'	Sandy loam.	None.	May 25	Sept. 1	9 feet	Killed Sept. 30	12 feet	1 inch
2. Wm. Crocker.	N. Y.	Erie.	43° 35'	Sandy loam.	Plaster.	May 20	Sept. 24	7	Killed Oct. 1		
3. Thomas R. Joyes, Jr.	Va.	Accomac.	38°	Sandy loam.	None.	April 7	Aug. 15	10	Ripe Sept. 15	14	1 1/2
4. William J. Tracy.	R. I.	Providence.	41° 40'	Light sandy loam.	Hog-yard.	May 20	Aug. 30		Killed Sept. 29	8 1/2	1
5. Howard Williamson.	Pa.	Chester.	40°	Slate, subsoil porous.	None.	May 9		10	Ripe Oct. 15	12	1
6. Hubert Greaves.	Ohio.	Sandusky.	41°	Rich, black, stiff loam.	None.	June 15	Sept. 12	12	Ripe Oct. 15	13	2
7. William Chase.	R. I.	Providence.	41° 40'	Sandy loam.	Stable.	May 15	Aug. 31	12	Ripe Oct. 15	13	1
8. A. W. Russell.	N. Y.	St. Lawrence.	44°	Sandy.	Barn-yard & leach'd ashes.	May 29	Oct. 5	8 1/2			
9. J. Selden, by John Hall.	Pa.	Pike.	41°	Sandy gravel.	Sod-leached ashes in hill.	June 5	Sept. 17		Killed Sept. 29	10	1 1/2
10. J. Selden, by P. Grimes.	Pa.	Pike.	41°	Damp loam, shelly sandstone.	None—old garden.	June 1	Sept. 18		Killed Sept. 29	10 1/2	1 1/2
11. Daniel Colklesser.	Md.	Washington.	39°	Sand, rubbage, &c., well rotted.	None.	May 15	Aug. 15		Ripe Sept. 25	12 1/2	1 1/2
12. Alfred H. Brown.	Mass.	Worcester.	42°	Rich garden loam.	Stable, & ashes & plaster.	May 26	Sept. 20	5 1/2	Killed Sept. 30	12	1 1/2
13. C. P. Vancil.	Ill.	Sangamon.	40°	Black loam.	None.	May 16		10	Ripe Sept. 14	11	1 1/2
14. S. Sayer.	Ohio.	Cochocton.	40°	Sandy loam.	A little barn-yard.	May 15		10	Ripe Sept. 15	12	1 1/2
15. Dr. S. S. Keene.	R. I.	Providence.	42°	Clay loam.	Barn-yard.	May 22	Sept. 6	10	Cut Sept. 29	11	1 1/2
16. John A. Bunce.	Wis.	Juneau.	43°	Sandy loam.	None—new land.	May 27			Oct. 12	12	1 1/2
17. R. Cramer.	Ill.	Mercer.	41°	Sandy loam.	None.	May 23		9	Ripe Oct. 15	11	1 1/2
18. A. B. Price.	Ind.	Porter.		Sandy loam, rich prairie.	None.	May 12	Aug. 28	11 1/2	Ripe Sept. 24	14 1/2	1 1/2
19. O. M. Colkins.	Ind.	Spencer.		Sandy loam.	None—an old fence row.	May 12			Ripe Oct. 12	12 1/2	1 1/2
20. S. C. Pruden.	Iowa	Van Buren.		Prairie loam.		M. J. J. 1					

Extracts from Letters accompanying the Above.

1. Soil, stiff sod of couch grass, formerly occupied by trees. The cane cut immediately after frost (the seed beginning to turn brown), and made into syrup.
2. Yellow corn on land adjoining—barely ripened.
3. I consider Sorghum of great value as a forage crop; shall plant five acres next year.
4. Not killed, but growing well October 5.
5. Season remarkably damp and cold. Some stalks, stripped, peeled, cut, pounded and boiled, pressed and strained, and boiled down, yielded 1 gallon of good molasses from 25 to 35 canes. The refuse eaten readily by hogs.
6. Good molasses (3 1/2 pints from 37 canes) obtained by method similar to No. 10. Hogs very fond of the bagasse.
7. Seeds merely formed—not more than half matured when frost came.
8. Continued ripening up to October 8, at which time it was uninjured by frost, though Indian corn had been partly killed. Planted *Agriculturist* package in 48 hills; from 38 hills made 2 gallons of good syrup, extracted by pounding stalks and boiling in water.
9. Seven canes yielded 3 1/2 quarts of juice, which gave 1 pint of good thick molasses.
10. September 29, the cane was not injured by a frost which killed the corn-blades.
11. From the *Agriculturist* letter-package of seed sent me I have raised half a bushel of seed. With a rude set of rollers, I obtained 1 gallon of syrup from the juice of 30 stalks.

How Promises the Chinese Sugar Cane?

Above we present a few regular reports, such as we called for last month. Many write us that they have not the necessary dates and figures. We hope, however, to get a larger number of statements to insert in this table by next month. It will be seen that, with a sufficient number of such reports from every section of the country, we can draw valuable general conclusions of the length of time required for the growth of the plant, the best soils and manures, the probability of its maturing in different latitudes, &c. Let us have as full reports as may be. In sending in renewals of subscriptions or new subscribers, please inclose a separate slip for the above table.

By our next issue, we shall have some valuable statements of full and accurate experiments regarding the saccharine properties of this new plant. We have never been over sanguine of the results, and have constantly advised our readers to caution in making large outlays in its cultivation, though we have encouraged moderate experiments, and have furnished a large amount of seed for this purpose.

The prospect that the Chinese Sugar Cane will prove valuable is now better than it has ever before appeared to us. Whether it will produce sugar is still unsettled. That good syrup and alcohol for manufacturing and other purposes can be made from it profitably in this latitude and still further North is now pretty well determined. Interesting statements of experiments now in progress in New Jersey and elsewhere will be ready for our December number. We have but just commenced operations upon our "Long Island Sugar Estate" (one large acre!) and the sweetening is being turned out at apparently a promising rate. But of this hereafter.

Hard Times, Hard Times,

Is the constant cry all around us, but thanks to an appreciative class of readers, this journal is on too firm a basis to materially suffer from the "times." Not a dollar of the funds belonging to the subscribers—belonging to them because paid in by them to meet its expenses through the year—we say not a dollar has been frittered away in wild stock or land speculations, but every dime has been securely invested where it would be surely forthcoming

when needed to meet current expenses. Let what money panics will come, our readers may depend upon always finding the "latch string out" at our office door; and if Uncle Sam's mail boys do not "suspend," each one may always look for his, or her paper promptly at the regular time.

"A BAKER'S DOZEN."

Not now, but in the "good old times," there were bakers who sold nice cakes at one for a penny, but when six pennies were paid, seven cakes were given, and fourteen for twelve pennies; hence arose the term Baker's Dozen, that is, fourteen to the dozen. It is said that even now, some bakers treat new customers in the same manner.

Be that as it may, we propose to treat our NEW SUBSCRIBERS in this way, that is to say:

All new subscribers for 1858 (Vol. XVII.) who send in their subscription during this month, November, will receive the November and December copies of this year without charge.

We make this offer for two reasons; first, as a sort of premium, or extra inducement; and second, we wish as many as possible to become acquainted with the *Agriculturist* before the commencement of the next volume, so that they may be ready to speak of it to their friends and neighbors, and perhaps thus bring them along to enjoy the valuable feast of fat things in store for all readers of this journal during 1858.

This offer extends to all new subscribers for 1858, received this month, whether they come singly or in clubs, or through voluntary agents—we have no agents but but those who act as such of their own free will, and there are hundreds among our present subscribers who have volunteered to do this, and thousands, we trust, of others, who will act thus, without having promised. Is it not so?

This offer only extends now to subscribers received during this month, except at very distant points, where this number does not arrive in time to forward new names before the close of the month. Last year we printed 6,000 extra copies for a similar offer, but the supply ran out before the last forwarded names came in, and we were compelled to disappoint some. This will not be the case this year with those forwarded during November, even if we have to print half a dozen extra editions to make this offer good.

NOW IS A GOOD TIME

to make up clubs of both old and new subscribers for 1858. Will our friends please take hold of the matter at once? The premium of extra numbers and seeds will assist you in inducing your neighbors to join you. Six subscribers are supplied for \$5. Ten or more subscribers for 80 cents each. We shall expend so much upon the paper itself, and in the distribution of seeds, &c., that we cannot possibly afford the enlarged paper at any lower rates without losing money, which, of course, we do not intend to do.

Our Seed Distribution.

For the information of new subscribers who have not seen our former statements, we here repeat that we are collecting from our own grounds, as well as from sundry other sources, a considerable variety of pure Field, Garden and Flower Seeds for free distribution among our subscribers. This collection will continue up to the close of the year. The seeds will be put up in packages suitable for mailing; and in the January number a list of those on hand will be published, from which every regular subscriber can select any three varieties desired. Arrangements will be made for sending large parcels by express.

These seeds are offered in part as premiums, and in part with the desire of disseminating to all parts of the

country, small parcels of both old and new varieties of plants which may by this means become more widely propagated.

We find ourselves again compelled, by sundry orders addressed to us, to state that we have no connection with, or interest in, any seed establishment, and we do not deal in seeds of any kind, nor in anything but newspapers, and of those only one kind—viz., *Agriculturists*. We cannot hereafter always reply individually to business orders outside of those connected with our own office. The distribution of useful seeds is only legitimate with us because connected with, and incidental to the dissemination of useful information.

Thirty-two Quarto Pages!!!

We have at last got this journal up to the size we have long desired. This we could not feel warranted in doing before, as we have been unwilling to do any other than a safe business, (our bump of caution is said to be large). We think now, that taking into account the size of this journal, the amount of type, the superior quality of paper upon which it is printed, and the amount of thought and care devoted to its pages by a large number of practical men, the *Agriculturist* is not excelled if equaled by any similar journal in the world. But we have only fully arrived at an ideal in one thing, viz. in size—the improvement in the intrinsic value, in the kind and character of its reading matter, in instructive illustrations, &c., &c., is but just commenced. Our motto for next year is EXCEL-STOR, —onward—upward—and if we live, the same will be the case the next, and the next year.

We have no idea of being obliged to beg of our old subscribers, or to offer premiums to them to continue with us and invite their friends to subscribe, for we intend to make so valuable a paper that no one who tills a foot of ground can afford to do without the *Agriculturist*.

If times be hard, there will be still more need of the aid of such a paper as this, to assist, by its teachings, hints and suggestions, in the more economical and more profitable culture of the soil.

Back Numbers of the Present Volume.

We are very frequently printing extra editions of this Volume, back to January, to supply new subscribers coming in from time to time, many of whom wish to go back to the beginning of the Volume. Let it be understood, then, that those subscribing in July, or at other periods, can at any time order the back numbers of this Volume.

Business Notices.

Fifty Cents a Line.

GROVER & BAKER'S CELEBRATED FAMILY SEWING MACHINES.



These Machines are unquestionably the best in the country.

No well-regulated family can afford to do without a Grover & Baker Machine made expressly for family sewing.

GROVER & BAKER,

Sewing Machine Co.,

495 Broadway, New-York;

18 Summer-street, Boston;

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87 Fourth-street, St. Louis, Mo.

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11 Camp-st., New-Orleans, La.

With a single exception, the actual regular circulation of the *Agriculturist* to subscribers is about **Fifteen Thousand greater** than that of any other Journal in the World devoted to Agriculture and Horticulture only.

Advertisements.

TERMS—(invariably cash before insertion):
Twenty-five cents per line of space for each insertion.
By the column or half column, \$30 per column.
Business Notices Fifty cents a line.
Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

American Farmers' Encyclopedia.

THE MOST COMPREHENSIVE WORK on American Agriculture, and a work of real value.
Twelve hundred pages, seventeen Lithographic Plates, besides other illustrations.
Price \$4. Sent by mail, post-paid, on receipt of price. Catalogues of Agricultural Books sent gratis to all applicants.
A. O. MOORE,
Agricultural Book Publisher, 140 Fulton-st., New-York.

NEW TREATISE ON LAND SURVEYING.

This work published by
E. C. & J. BIDDLE, Philadelphia.
A TREATISE ON SURVEYING, in which the theory and practice are fully explained. Preceded by a short treatise on Logarithms, and also by a compendious system of Plane Trigonometry. The whole illustrated by numerous examples. By Samuel Alsop, author of a "Treatise on Algebra," &c.
In the above named work the author has presented the theory plainly and comprehensively; has given definite and precise directions for practice, and has embraced in it every thing which an extensive business in Land Surveying, would be likely to require.
The work will be mailed at \$1 75 per copy, including postage.

Just Issued from the Press of
J. B. LIPPINCOTT & CO

CLIMATOLOGY OF THE UNITED STATES, AND OF THE TEMPERATE LATITUDES OF THE NORTH AMERICAN CONTINENT.

Embracing a full comparison of these, with the Climatology of the Temperate Latitudes of Europe and Asia; with Isothermal and Rain Charts, including a summary of Meteorological Observations in the United States, condensed from recent scientific and official publications, by Lorin Bisset, author of several Reports on American Climatology. 1 vol. large octavo. Price \$5.

II.

McMAHON'S AMERICAN GARDENER.

he American Gardener's Calendar, containing a complete account of all the work necessary to be done in the Kitchen Garden, Fruit Garden, Flower Garden, Orchard, Vineyard, Nursery, Pleasure Ground, &c. &c., for every month in the year, with practical directions, and a copious Index. By Bernard McMahon. Eleventh Edition. Revised and Illustrated under the supervision of J. Jay Smith. 1 vol. 8 vo. Price \$2.
The above works will be sent by mail upon receipt of price.
J. B. LIPPINCOTT & CO., Philadelphia.

AGENTS WANTED.

EXCELLENT BUSINESS OPENING.

Wanted a few energetic, industrious Men, to sell Agricultural Books among the Farmers. Very favorable terms will be given. With proper attention, more than \$100 per month, clear profit, above all expenses, can be realized. A rare chance to make money without risk. For particulars, apply immediately to A. O. MOORE, Agricultural Book Publisher, No. 140 Fulton-street, New-York.

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WANTED—In every county in the United States, active, industrious and enterprising men, as Agents for the sale, by subscription, of valuable and interesting Books; all of them being expressly adapted to the wants of every family, and containing nothing of a pernicious or injudicious tendency. Our publications are among the best in the country, and good agents can realize a profit from \$2 to \$3 per day by engaging in the business. A small capital of only \$20 to \$30 is required. For further particulars, address
ROBERT SEARS, Publisher,
No. 181 William-street, New-York.

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STEEL PLATE ENGRAVINGS, including the beautifully illustrated engraving of the "LORD'S PRAYER and TEN COMMANDMENTS." An active person, with a small capital, can make \$50 to \$60 per month. For particulars, address
D. H. MULFORD, 167 Broadway, New-York.

EMPLOYMENT—Young men in every

neighborhood may have healthful, pleasant, and profitable employment by engaging in the sale of our new and valuable books, and canvassing for our popular family journals. Our new reformatory book should be placed within the reach of every family in the land. Thousands of copies might be sold where they have never yet been introduced. A few dollars—say \$15 or \$25—is enough to commence with. Young men and women, teachers, clergymen, traveling agents, all may engage in this good cause, with profit to themselves and great good to others. Our journals are everywhere popular, and canvassers will find them well adapted to the wants of the people everywhere. For terms and particulars, address
FOWLER AND WELLS, No. 308 Broadway, New-York.

THE BEST BOOKS TO SELL.—Book-

sellors, Agents and Newsmen, will find a quick sale for these new Hand-Books, just published: "HOW TO WRITE," "HOW TO TALK," "HOW TO BEHAVE," and "HOW TO DO BUSINESS." Price, free by mail, only 30 cents each, or the four in paper, \$1. Complete in one large gilt volume \$1 50 now ready. Try them. Address
FOWLER AND WELLS, 308 Broadway, New-York.

HOW TO DO GOOD AND GET "PAID

FOR IT."—Take an Agency for our publications. The terms are such that there can be no possibility of loss. EVERY FAMILY will be glad to obtain some of them. For particulars, address
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Dadd's Modern Horse Doctor.

AN AMERICAN BOOK FOR AMERICAN FARMERS!!
It treats of the diseases peculiar to the American climate. It recommends simple modern remedies instead of dangerous poisons.
It teaches how to keep your horse in good health, and how to cure him if he is lame or sick.
It only costs ONE DOLLAR, and will be sent by mail prepaid.
A valuable catalogue of Agricultural Books will be sent gratis to all who apply.
A. O. MOORE,
Agricultural Book Publisher, 140 Fulton-st., New-York.

DUTCH BULBOUS FLOWER ROOTS.

The Subscriber invites the attention of the Public to his large collection of

First Class Bulbous Roots,

Selected at the first FLOWER NURSERIES in EUROPE, comprising all the choicest varieties cultivated, including many new and valuable sorts of DOUBLE AND SINGLE HYACINTHS, of every variety of shade and color.

Early and Late Double and Single Tulips

for Pots, or Garden Planting.

Double and Single Narcissus,

LILLIUMS, CROWN IMPERIALS, GLADIOLUS,

Double and Single JONQUILS.

Snowdrops, Crocus, Iris, Ranunculus, Anemones, &c., &c. Also, a variety of CAPE BULBS, for Greenhouse culture. Catalogues of Names, Descriptions, and Prices, will be forwarded to all applicants free to all quarters of the United States.

ANDREW BRIDGEMAN,
Florist, etc.,

878 Broadway, New-York City.

RAVENSWOOD

Fruit-Garden Plants.

WHOLESALE AND RETAIL.—We offer a choice variety of Small Fruits, Strawberries, Raspberries, Blackberries, Currants, Rhubarb, &c., &c., including

BRINCKLE'S ORANGE RASPBERRY,

which is considered the best of all Raspberries, unequalled in flavor and beauty, and a very vigorous grower and exceedingly prolific. Also the Col. Wilder, Thunderer and Cushing Raspberries. Also

MYATT'S LINNAEUS RHUBARB,

a new English variety, very superior, particularly tender, fine flavored and productive. Mr. Charles Downing states it to be the best either for market or garden culture. See his article in the *Horticulturist*, August, 1857.

Catalogues, with prices, furnished on application.
To Market Gardeners, wishing large quantities, we make liberal deductions.
FREEMAN & KENDALL,
Ravenwood, L. I., near New-York.

Please read the following references:
We have visited Messrs. Freeman & Kendall's Fruit Gardens from which they are now offering to sell Plants, and we can say their Plants are well grown and very superior varieties. The Orange Raspberry and Linnaeus Rhubarb particularly. We take pleasure in recommending them to the public.
CHARLES DOWNING, Newburg,
C. W. GRANT, Iona, near Peekskill.

LINNAEUS RHUBARB.

PARSONS & CO.,

FLUSHING, NEAR NEW-YORK.

OFFER FOR SALE THIS SUPERIOR
variety of PIE PLANT, at \$10 per hundred, or \$80 per thousand crowns.



ISABELLA AND CATAWBA GRAPE

Vines, of proper age for forming Vineyards, cultivated from, and containing all the good qualities which the most improved cultivation for over sixteen years has conferred on the Croton and Catawba Vines, are offered to the public. Those who may purchase will receive such instructions for four years, as will enable them to cultivate the Grape with entire success, provided their locality is not too far north.
All communications addressed to R. T. UNDERHILL, M. D., New-York, or Croton Point, Westchester County, N. Y., will receive attention.

The additional experience of the past four seasons gives him full assurance that, by improved cultivation, pruning, &c., a crop of good fruit can be obtained every year, in most of the Northern, all of the Middle, Western and Southern States.
N. B.—To those who take sufficient to plant six acres, as he directs, he will, when they commence bearing, furnish the owner with one of his Vine-dressers, whom he has instructed in his mode of cultivation, and he will do all the labor of the vineyard, and insure the most perfect success. The only charge, a reasonable compensation for the labor.
Also, APPLE-QUINCE TREES, (which are sometimes called the Orange Quince,) for sale as above R. T. U.

REBECCA GRAPE VINES FOR SALE.

This choice variety is an American seedling, and a HARDY WHITE GRAPE,
of an excellence long sought for, but never before found. Its time of ripening is a week or ten days

EARLIER THAN THE ISABELLA,
and far surpassing that and every other native variety as a table grape. The vine is a thrifty grower, fruit of medium size, color greenish white, tinged with amber in the sun; flesh very juicy, soft and melting, with tender pulp; flavor rich, sugary, vinous and brisk, with a peculiar luscious aroma distinct from any other grape, and continues in use long after it is ripe, without shrivelling, which renders it well adapted for transportation. It has received

THE FIRST PREMIUMS
from several of the largest and best Horticultural Societies in this country.
Good strong vines, one year old, propagated from the original vine, ready for delivery by the 15th of October. Price \$3 each, or \$24 per dozen.
WM. BROOKSBANK,
Prospect Hill Nursery, near Hudson, Columbia Co., N. Y.

PARSONS & CO.,

FLUSHING, NEAR NEW-YORK.

Offer for sale an assortment of Trees and Plants which they have grown for the use of amateurs, and have prepared, by frequent transplanting and other modes, for success in moving. They are of fine size and symmetrical form, and among them will be found

STANDARD APPLES of fine quality.
STANDARD PEARS, PLUMS and CHERRIES.
PEACHES, APRICOTS and NECTARINES, on plum stocks and their own roots.

DWARF PEARS of fine form, and ready for bearing.
GOOSEBERRIES and CURRANTS, strong plants of the best sorts.
RASPBERRIES—FASTOLF, RED ANTWERP, FILLBASKET and other known sorts.

STRAWBERRIES of all the best varieties.
NATIVE GRAPES—ISABELLA, CATAWBA, and other hardy varieties.

FOREIGN GRAPES—All the well-known sorts, with some new varieties of great excellence. These plants are propagated from vines that have borne abundantly for some years, and are known to be correct.

Great care is taken in the cultivation of Fruit trees, and none but those of the best quality are allowed to be sent out.

THE ORNAMENTAL DEPARTMENT.

Contains Trees of all sizes for lawns and streets, including Elm, Silver, Norway and Sycamore Maples, Catalpas, Lindens, Tulip Trees, Cypress, Larch, Willows, Ash, Abele, Orientale Plane, and all the best varieties of deciduous trees.

It also includes Evergreens of fine size for single planting, and of small sizes at low prices, from one foot upwards, for massing; among them are Norway Spruce, Balsam Fir, Austrian Pine, Hemlock, White Pine, Scotch Fir, and other varieties. The best shrubs include many fine varieties at low prices, for massing, of which the *Rhododendron Catawbiense* can be particularly recommended for its fine evergreen foliage, showy bloom, and perfect hardiness.

The ROSES are cultivated in very large quantity, on their own roots, of all the most rare varieties, and to those who purchase in quantity, will be sold at greatly reduced rates.

THE EXOTIC DEPARTMENT

Contains a fine assortment of *Camellias*, grown as bushy, rather than tall, slender plants; and also contains all the well-known varieties of exotic plants, and many rare sorts introduced from Europe annually. These are all carefully grown for those who desire plants of symmetry and beauty.

CATALOGUES of all the departments will be furnished on application. Great care will be taken in packing, and trees will be delivered in New-York, and thence shipped as directed.

OAKLAND NURSERY,

Throg's Neck,

WESTCHESTER CO., NEW-YORK.

The Subscriber offers for sale a fine collection of Fruit, Ornamental Trees and Shrubbery of the most vigorous growth. His stock of Evergreens is extensive, extra large sized trees of Norway Fir, White Pine and Scotch Fir can be furnished from 6 to 10 feet in height, in large or small quantities. These Trees are well adapted for giving immediate effect in new lawn plantations—of smaller size, including the same varieties, are Silver Fir, Balsam Fir, Black Spruce Fir, Cembra Pine, Austrian Pine, American Arbor Vitae, Chinese dog, Siberian dog, English and Irish Yew, and some of the best new Evergreens.

PEAR TREES.

His collection of Pears includes the best leading proved sorts, and of the newer varieties are Sheldon, Howell, Boston, Beurre Clingau, Gen. Lamarriere, Fordanet and Doyenne du Comice, Beurre Bachelier, Grosse Pêche, Doyenne and Beurre Sterckman, Church, Parsonage, &c. Also, a good stock of Dwarf Pears, Cherries, Apples and small fruits.

DECIDUOUS TREES.

A general collection of Deciduous Trees from extra large to small size, among these are Norway, Silver and Sycamore Maples, Elms, Ash, Oaks, Beech, Purple and Weeping dog, Larch, Laburnum, Paulownia, &c., &c.

A good collection of Shrubbery, Roses, Green House Plants and Bedding Plants, Hollyhocks, Japan Lilies, &c., &c.

WM. L. FERRIS, Oakland Nursery,

Throg's Neck, Westchester Co., N. Y.

Catalogues furnished on application.

Packages of Trees delivered in New-York City without charge for freight, and thence shipped as directed.

Highland Nurseries, Syracuse, N. Y.

These Nurseries, situated on the hills at the southwest part of the city, produce trees and shrubs of a very vigorous growth, the wood being thoroughly ripened—and will better endure transplanting or a change of climate, than those of a forced growth, on warmer, richer soils.

Our Stock is large and comprises a full assortment of FRUIT AND ORNAMENTAL TREES, VINES AND SHRUBBERY.

Desirous of making new arrangements of some portions of our grounds, and for the purpose of clearing them this Fall, we offer our stock at from 25 to 40 per cent. less than customary prices. Nurserymen, or other desiring to plant largely, will find it much to their advantage to give us a call.

Apply by mail for a catalogue, and state particularly what kinds of trees and how many are wanted.
Sept., 1857. COWLES & WARREN.

New-Canada Nurseries.

The subscribers would invite attention to their Nursery stock, consisting of
100,000 Apple trees from 2 to 5 years from the bud or graft;
40,000 Peach trees, 1 year from the bud;
20,000 2 years

Pear trees, Standard and Dwarf, Cherry, Apricot and Quince trees. Also 20,000 American Arbor Vitae from three to five feet high (twice transplanted), Norway Spruce and other Ornamental trees. Address

STEPHEN HOYT & CO.,
New-Canada, Aug. 15, 1857. New-Canada, Ct.

NOTICE TO ORCHARDISTS.

25,000 PEACH TREES, ONE YEAR FROM THE BUD, OF STRONG GROWTH.

Being always engaged in the culture of the fruit for market, purchasers may rely upon obtaining the varieties best adapted to their interests.

20,000 Osage Orange plants, 2 years growth, twice cut back and root pruned.
ASHER HANCE & SON,
Rumson Nurseries, near Red Bank,
Monmouth Co., N. J.

RUSSIA OR BASS MATS, GUNNY

BAGS, TWINES, &c., suitable for Nursery purposes, for sale in lots to suit, by

D. W. MANWARING, Importer,
248 Front-street, New-York.

SURE PAY AND NO RISK.—PLEASANT

AND PROFITABLE EMPLOYMENT may be had by addressing
FOWLER AND WELLS, No. 308 Broadway, New-York.

LAWTON (OR NEW-ROCHELLE) BLACKBERRY PLANTS.

PRICES REDUCED!

The Subscribers announce to their friends and customers that they have now

OVER SIX ACRES
of the

GENUINE LAWTON (OR NEW-ROCHELLE) BLACKBERRY PLANTS

under cultivation, and in good condition.

They are therefore prepared to fill large orders the coming FALL and the next SPRING, at the following reduced prices:

One Thousand Plants.....	\$125
One Hundred Plants.....	15
Fifty Plants.....	8
Two Dozen Plants.....	4 50
One Dozen Plants.....	2 50
One Half Dozen Plants.....	1 50

Good Plants for setting, of a second size, will be sold for \$100 per 1,000 Plants, or \$12 per 100 Plants.

N. B.—All Plants ordered of us will be TAKEN UP AND PACKED with the GREATEST CARE, and UNDER OUR OWN PERSONAL SUPERVISION.

Of the MANY THOUSANDS sent out by us last year, we have heard very few instances of failure, notwithstanding that they have been forwarded to

EVERY PART OF THE COUNTRY,

and the setting out has often been entrusted to unskillful hands. Printed directions for setting and cultivating are sent with every package.

GEORGE SEYMOUR & CO.,
South Norwalk, Conn.

N. B.—DREW & FRENCH, 85 Barclay-street, New-York City, are our authorized agents for the sale of these plants, from whom they can be obtained of same quality and at same price as of ourselves.

GEORGE SEYMOUR & CO.

Lawton Blackberry Plants.

In all cases warranted of the original stock, and raised under the supervision of the Subscriber upon his own grounds in New Rochelle.

SCALE OF PRICES BY THE DOZEN.

A package of one dozen.....	\$3
Do. two dozen.....	5
Do. five dozen.....	10
Do. eight dozen.....	15
Do. twelve dozen.....	20

The name and direction of purchasers should be distinctly written, and the money accompany the order.

Address: WILLIAM LAWTON,
54 Wall street, New-York, or New Rochelle, N. Y.
OCTOBER, 1857.

LAWTON (OR NEW-ROCHELLE) BLACKBERRY.

We are prepared to fill orders PROMPTLY for GENUINE PLANTS of this remarkable fruit, carefully packed for shipment to any part of the world, from Messrs. George Seymour & Co., the Messrs. Hallock and others of the largest and most reliable growers, at the following reduced prices, viz:

\$125 per Thousand; \$15 per Hundred;
\$8 per Fifty; \$6 per Two Dozen;
\$2 50 per One Dozen; \$1 50 per Half Dozen.

Pamphlets treating of Origin, Characteristics and Culture of the Plant, forwarded on receipt of 6 cents.

DREW & FRENCH,

Commission Dealers in Domestic Fruit and Produce,
No. 85 Barclay-street, New-York.

NEWMAN'S THORNLESS BLACKBERRY.—Strong and finely rooted Plants of this valuable new variety will be sent out this season at \$4 per doz., \$10 per fifty, \$18 per hundred, \$130 per thousand. Address: A. A. BENSEL, Milton, Ulster Co., N. Y.
Sole Agent for the sale of Plants.

BAGLEY'S EVER-BEARING RASPBERRY.

The Proprietor of this new and valuable addition to our gardens, is now prepared to supply orders for large and well-grown plants. After an experience of FIVE YEARS he is able to speak positively as to its good qualities.

1. The canes are strong and bushy, do not require stakes, are EVER-BEARING with us Winter covering, and are biennial.
2. One principal crop is produced in July, followed by a good second crop through August, September and October. Good pickings are had at the present time, which have received premiums from various horticultural shows.

3. The fruit is red, rich, and fine flavored.
Orders from Nurseriesmen and others, for large quantities, will be supplied at \$1 per dozen by the proprietor.

A. BAGLEY, New Haven, Conn.

Also, by Bridgeman and R. L. Allen & Co., Seedsman, New York City.

The Allen Raspberry.

I again offer to the public this valuable, hardy, red RASPBERRY, of the Antwerp family, but not the TRUE Red Antwerp of the nurseries and market gardeners, as the Allen is perfectly hardy without Winter protection in any climate where it has been tried, up to 45 deg. North. Mr. Allen has cultivated it in his farm gardens, of which I now have the charge, for ten years past, and it was only offered for sale last year, after fully testing its hardiness, prolific bearing, and large, high-flavored fruit.

Its strong growth of cane requires no support, and it is every way a most valuable variety, not known elsewhere than in its present grounds, and places to which it has been transplanted.

Price 10 cents each, in quantities less than sixty. For five to eight dozen, \$1 per dozen. For one hundred or more, \$7 per hundred; payment remitted with the order.

The plants will be forwarded by express, railroad or steamboat, as soon after the October frosts as they can be taken up and packed.

A full description of the plant and fruit, and directions for cultivation, will be sent with each package.

Address care of LEWIS F. ALLEN, Esq., Black Rock, N. Y.
August 15, 1857. THOMAS DUFF.

THERMOMETERS, BAROMETERS, &c.
of reliable quality and various descriptions, among which are those particularly suited for Horticultural purposes, which register the coldest and warmest degree of temperature during the 24 hours, in the absence of the observer. For sale by

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With such a team, if necessary, a power of from three to five hundred tons can be made to bear upon a single stump!

One man can work it, though two work it at better advantage. The time required to extract stumps from six inches to four feet in diameter will vary from two to ten minutes. With this Machine, standing trees may be taken out, and large rocks removed from their beds; and it is the best Machine ever invented, not only for pulling stumps, but for moving buildings, and other heavy bodies. All the iron used is wrought, of peculiar quality, imported, sustaining 57 tons to the inch!

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This patent begins to be appreciated. All who wish to bring so good a thing into use, and thereby make a "pile of money," should come to Orange, see the inventor, see the workings of the machine with their own eyes, and if not perfectly satisfied, respecting its merits, all their expenses shall be cheerfully paid.

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REFERENCES.—Hon. Simon Brown Editor New-England Farmer, Editor Plough, Loom and Anvil; and Mr Moore, Editor Rural New-Yorker.

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the Government to aid the construction of this Road, and are among the richest and most fertile in the world. They extend from Northeast and Northwest, through the middle of the State, to the extreme South, and include every variety of climate and productions found between those parallels of latitude. The Northern portion is chiefly prairie, interspersed with fine groves, and in the Middle and Southern sections timber predominates, alternating with beautiful prairies and openings.

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The great fertility of these lands, which are a black rich mold from two to five feet deep, and gently rolling—their contiguity to this road, by which every facility is furnished for travel and transportation to the principal markets North, South, East, West, and the economy with which they can be cultivated, render them the most valuable investment that can be found, and present the most favorable opportunity for persons of industrious habits and small means to acquire a comfortable independence in a few years.

Chicago is now the greatest grain market in the world, and the facility and economy with which the products of these lands can be transported to that market, make them much more profitable at the prices asked than those more remote at Government rates as the additional cost of transportation is a perpetual tax on the latter, which must be borne by the producer in the reduced price he receives for his grain, &c.

The Title is Perfect, and when the final payments are made, Deeds are executed by the Trustees appointed by the State, and in whom the title is vested to the purchasers, which convey to them absolute titles in Fee Simple, free and clear of every incumbrance, lien or mortgage.

The prices are from \$6 to \$30.

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Those who purchase on long credit give notes payable in 2, 3, 4, 5 and 6 years after date, and are required to improve one-tenth annually for five years, so as to have one-half the land under cultivation at the end of that time.

Competent Surveyors will accompany those who wish to examine these lands, free of charge, and aid them in making selections.

The lands remaining unsold are as rich and valuable as those which have been disposed of.

SECTIONAL MAPS

Will be sent to any one who will inclose fifty cents in Postage Stamps, and Books or Pamphlets, containing numerous instances of successful farming, signed by respectable and well-known farmers living in the neighborhood of the Railroad lands throughout the State; also the cost of fencing, price of cattle expense of harvesting, threshing, etc., or any other information, will be cheerfully given on application, either personally or by letter, in English, French or German, addressed to

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MARKET REVIEW, WEATHER NOTES, &c.

AMERICAN AGRICULTURIST OFFICE,
New-York, Oct. 22, 1887.

The Breadstuff Markets have been seriously disturbed by the recent money panic, and sales of Western crops came to a dead halt for want of cash or credit to move them Eastward. The Banks which had hitherto played an important part in this trade, by loaning funds for sixty or ninety days, were compelled by failures at home to withdraw the usual facilities to grain dealers. We are glad to announce that an arrangement has just been entered into by the Banks of this City, which will tend to set the crops in motion, and bring forward large quantities this season, if the canals do not close under four or five weeks. Farmers in debt should sell at once and pay up their "store debts," thus enabling country merchants to pay the jobbers, and through them the importers and manufacturers. If this be done speedily, hundreds if not thousands of failures will be averted, the Banks will be able to resume specie payments, and the country be saved from an otherwise far worse financial condition than now prevails. Yesterday witnessed a decidedly better feeling at our Corn Exchange, with a little advance in the price of flour and grain. Prices, however, will go little above present figures, unless the Canals be speedily closed by cold weather, in which case Breadstuffs will be higher here and lower in the country.

Cotton has fallen greatly in price; there is now nothing doing, and no quotations can be given. It is scarcely possible to name the selling rates for Hay, Hops, Molasses, Potatoes, Provisions, Rice, Sugar, or Tobacco, since the entire market was thrown into confusion by the money crisis, and several days must elapse before regular prices can be established. We present, however, the following carefully prepared quotations of prices as they are to-day, with those given at our last report, for comparison:

	Sept. 23.	Oct. 22.
Flour—Common to Extra State	\$5 35 @ 6 00	\$4 60 @ 5 20
Common to Fancy Western	5 45 @ 5 85	4 60 @ 5 10
Extra Western	5 75 @ 6 25	4 80 @ 5 30
Fancy to Extra Genesee	5 95 @ 6 00	5 20 @ 5 50
Mixed to Extra Southern	5 70 @ 6 00	5 40 @ 5 70
RYE FLOUR—Fine and Super	4 10 @ 5 35	3 50 @ 4 62½
CORN MEAL	4 10 @ 4 50	3 25 @ 3 75
WHEAT—Canada White	1 35 @ 1 52½	1 25 @ 1 35
Western White	1 30 @ 1 55	1 15 @ 1 42
Southern White	1 30 @ 1 55	1 25 @ 1 43
All kinds of Red	1 00 @ 1 35	1 03 @ 1 27
CORN—Mixed	75 @ 80	71 @ 72
Yellow	80 @ 85	Nominal
White	80 @ 85	Nominal
OATS—Western	47 @ 50	46 @ 50
State	45 @ 47	46 @ 48
Southern	36 @ 43	33 @ 40
RYE	90 @ 95	75 @ 80
BARLEY	90 @ 95	75 @ 80
White Beans	Nominal	1 62½ @ 1 75
Black eyed Peas, per 2 bush.	Nominal	3 50 @
HAY, in bales, per 100 lbs.	50 @ 75	45 @ 70
COTTON—Middlings, per lb.	15½ @	Nominal
Fair	16½ @	Nominal
RICE, per 100 lbs.	4 50 @ 5 62½	3 00 @ 4 25
HOPS, per lb.	10 @ 13	6 @ 9
PORK—Mess, per bbl.	25 00 @	21 00 @ 21 50
Prime, per bbl.	28 00 @	24 00 @ 24 00
BEEF—Boned and Mess	15 50 @ 17 00	12 00 @ 14 00
Country mess	Nominal	12 50 @ 13 00
prime	Nominal	9 50 @ 10 00
HOGS, Dressed, per lb.	8½ @ 9½	6½ @ 7½
Lard, in tubs, per lb.	14 @ 14½	12 @ 14
BUTTER—Western, per lb.	14 @ 15	12 @ 14
State, per lb.	17 @ 25	16 @ 24
CHEESE, per lb.	7 @ 9½	6 @ 8½
FEATHERS, Live Geese per lb.	46 @ 50	44 @ 48
SEED—Clover, per lb.	12 @	11 @ 12
Timothy, per bushel	Nominal	Nominal
Timothy, reaped, per bushel	3 25 @ 4 00	Nominal
SUGAR, Brown per lb.	6½ @ 10½	6 @ 9
MOLASSES, New Orleans, per gal.	45 @ 50	40 @ 50
COFFEE, Rio, per lb.	10½ @ 12½	10½ @ 11½
Hudson Teas, per lb.	37 @ 75	40 @ 75
Congou Teas	35 @ 60	32 @ 55
TOBACCO—Kentucky, &c. per lb.	11 @ 19	9 @ 20
Seed Leaf per lb.	12 @ 40	13 @ 35
Wool—Domestic fleece, per lb.	35 @ 55	Nominal
Domestic, pulled, per lb.	32 @ 50	Nominal
HEMP—Underdressed, per ton	160 00 @ 180	Nominal
Dressed American, per ton	210 00 @ 225	Nominal
TALLOW, per lb.	11½ @ 11½	8 @ 9
OIL CAKE, per ton	31 00 @ 42 00	30 00 @ 35 00
POTATOES—Fines, per bbl.	2 00 @ 2 25	1 67 @ 2 00
Dyckman, per bbl.	2 50 @ 2 75	2 25 @ 2 75
Mercers, per bbl.	2 75 @ 3 25	2 50 @ 3 00
Sweet, per bbl.	2 50 @ 3 25	2 00 @ 3 00
ONIONS—Red, per bbl.	1 35 @ 1 50	1 02 @ 1 25
White and yellow, per bbl.	1 75 @ 2 00	1 50 @ 1 75
BETS—Per 100 bushes	1 00 @ 2 00	31 @ 37
CRANBERRIES—Per bbl.	8 50 @	6 00 @ 10 00
QUINCES, per bbl.	4 00 @	4 00 @ 4 50
APPLES—Common, per bbl.	1 50 @ 2 00	1 50 @ 1 50
Table, per bbl.	3 00 @ 4 00	2 50 @ 3 00
Pail Pippins, per bbl.	3 00 @ 5 00	2 50 @ 3 00
PEARS—Common, per bbl.	1 50 @ 2 00	1 50 @ 3 00
PIGEONS, wild, per dozen	2 50 @ 4 00	75 @ 80
PEACHES—Per basket	2 50 @ 4 00	1 25 @ 2 50
PLUMS—Per bushel	3 50 @ 5 00	76 @
TURNIPS—Ruta bagas, per bbl.	1 25 @ 1 50	76 @ 1 00
PUMPKINS—Per 100	4 00 @ 6 00	4 00 @ 10 00
SQUASHES—Marrow, per bbl.	1 25 @ 1 50	1 25 @ 1 50
BEANS—Lima, per bushel	50 @ 62	50 @ 75
CABBAGES—Per 100	1 00 @ 3 50	1 25 @ 3 50
CARLIPOWDER—Per dozen	87 @ 1 00	50 @ 75
ECO PLANTS—Per dozen	50 @ 62	37 @ 44
CELERY—Per dozen	75 @ 1 00	87 @ 1 00
POULTRY—Fowls, per pair	88 @ 1 00	88 @ 1 00
Chickens, per pair	50 @ 1 00	50 @ 1 25
Ducks, per pair	75 @ 1 25	75 @ 1 25
Turkeys, per lb.	20 @ 22	14 @ 16
Geese, per lb.	1 00 @ 1 50	1 00 @ 1 50
Pigs—Roasters	1 75 @ 2 25	1 25 @ 3 00

A statement of the total receipts of the leading kinds of Breadstuffs, by railroad, river and coastwise, and of the total sales, here, for four weeks, ending to-day.

	Receipts.	Sales.
Wheat Flour, bbls.	387,000	281,500
Wheat, bushels	719,000	1,037,700
Corn, bushels	371,000	679,500
Rye, bushels	5,300	17,700
Barley, bushels	64,000	15,000
Oats, bushels	76,500	

LIVE STOCK MARKETS.—The Cattle Markets have been much depressed, chiefly by the disturbance in finances. A lack of cash funds, current at the West, has kept buyers

out of the market. The sales on the 14th, a week ago yesterday, were the dulllest and lowest we have seen at the cattle yards in many years. Yesterday matters brightened up a little, the yards were cleared out, and there is a better prospect ahead. The cattle are all wanted at the West to consume the corn crop, not very saleable now. The very low price of hides (4c.) and tallow (5c.) is one cause of the decline in price of cattle. The receipts of Beef Cattle in this city for five weeks ending yesterday, were 17,631 against 16,732 for the preceding five weeks. The market varied thus: Sept. 23, trifling decline; Sept. 30, 1c. ½ decline; Oct. 7, small decline; Oct. 14, 1c. decline; Oct. 21, 1c. advance—total variation for month, 1c. decline. Prices ranged yesterday (Oct. 21)—First quality, 10½c. @ 11c. ½ for estimated dressed weight; medium quality, 9c. @ 9½c.; poor, 7½c. @ 8½c.; poorest, 6½c. @ 7½c.; general selling prices, 8c. @ 9½c.; average of all sales, 8½c. to 9c.

Live Sheep and Lambs received here in five weeks, 29,752. Prices have ruled low, but have strengthened this week. Sheep and Lambs now range from 6c. to 10c. ½ for the estimated dressed meat, which is a trifle more than half the live weight of fair Sheep. Pelts (wool Sheep skins) only bring 44c. @ 50c. each. The Hog market is dull, with arrivals exceeding the demand. They, too, should be kept at the West consuming corn. Live Hogs are now worth, for corn-fatted, 5½c. @ 6c. ½ live weight; for distillery fed, 5c. @ 5½c.

THE WEATHER during the last week in September, and thus far in October, has been generally very favorable for maturing the corn crop and keeping up a good supply of pasturage. (See closing remarks on page 248.) Corn has ripened well in most parts of the country, though touched by frost at the North on the last day of September. In this vicinity, corn, and especially the sugar cane, is still green and growing. Late flowers are in full bloom, and the gardens are almost as green as in August.

Our Weather Notes, condensed, read: Sept. 24, 25, clear, cool; 26, 27, 28, clear, mild, even warm; 29, 30, cooler, with frost on morning of Sept. 30. Oct. 1, clear, cool, mercury 85° at sun-rise, with a little white frost; 2, 3, mild and pleasant; 4, clear, warm, cool night; 5, 6, 7, 8, 9, 10, 11, 12, clear, mild, and very pleasant; 13, cool, heavy fogs, but clear afternoon; 14, showery; 15, warm rain; 16, clear, rainy P. M.; 17, 18, clear, cool; 19, cloudy; 20, 21, cool, first chilly winds, an Autumn day; 22, signs of Winter's approach, but still pleasant.

A Word About Money.

Though "Specie Payments" are nominally suspended throughout the country, we beg leave to inform our readers that we receive, at par, all notes of the unbroken banks of New-England; also of all New-York State banks secured by pledge of public Stocks (all are so secured except a very few of the old Safety Fund banks); also of unbroken banks of New-Jersey and Pennsylvania. When necessary, we will also receive for subscriptions the notes of any well-secured Western and Southern banks, which are in good credit at home, and which can be sold here at any moderate discount.

However, since we furnish our paper at the lowest possible living rate, with little dependence upon a large profit from advertising, and as we desire to devote as large a sum as possible to further improvements in the paper itself, and in the distribution of seeds, we ask, as a particular favor, that whenever possible our friends will make their remittances in Eastern, New-York, or New-Jersey bills, or in three-cent postage stamps, or gold. Where sums of over five dollars are sent at one time, and drafts on New-York City can be procured, it is safer and more desirable that these should be sent. One-half of the exchange on such drafts may at all times be charged to us, and deducted from the amount forwarded.

Bills of the following New-England banks are at present discredited in this city.

MAINE.—Canton; Exchange, of Bangor; Maritime; Monsum; Rockland; Ellsworth; Hancock; Hallowell; Sanford.

NEW-HAMPSHIRE.—Exeter.

MASSACHUSETTS.—Bass River; Lee; Western.

VERMONT.—St. Albans; So. Royalton; Stark; Danby.

CONNECTICUT.—Bridgeport City; Exchange, Hartford; Charter Oak; Hartford Co.; Mercantile, Hartford;

Wooster; Hatters; Pahquoque; Colchester; Merchants' Exchange, Bridgeport; North America; Pawtucket; Thompson, Windham Co.; Woodbury. Nearly all the Connecticut Banks here named will doubtless soon be good.

RHODE ISLAND.—Republic; Farmers' Bank, Wickford; R. I. Central; Tiverton; Warwick.

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OUR BASKET; or Notes to Correspondents and Gleanings: Apples Rotting—Early Potatoes—Flowering Bulbs—Italian Rye Grass—Mice vs. Trees—Saw-Dust—Sugar Cane Seed Thresher

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ORANGE JUDD,

No. 189 Water-st., New-York.